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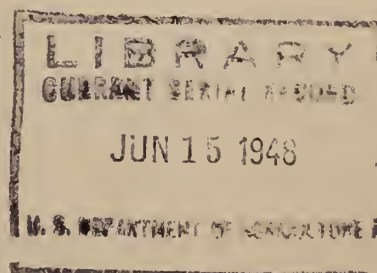
× IMPARTING WATER REPELLENCY TO TEXTILES BY CHEMICAL METHODS:

AN INDEX OF COMPOUNDS USED

By

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AN INDEX OF COMPOUNDS USED

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INTRODUCTION

The authors have recently prepared a review of the literature on chemical methods of producing water-repellent textiles.* During the compilation, a list was assembled of the compounds used as water-repellent agents. These compounds are indexed here with the object of facilitating reference to patents or literature relating to the compound specifically of interest. References were collected through October 1947. Where it was impossible to consult originals or photostats, secondary sources were employed and are indicated as such in "Literature Cited." References have been numbered exactly as in the literature review so that one compilation may supplement the other.

This index includes compounds cited particularly as water-repellent agents, as well as those mentioned as starting materials or intermediates, excluding however, such simple reagents as water, ammonia, and hydrochloric acid. Where type-compounds have been patented under a general classification using, for instance, symbols such as "R" to represent an alkyl group, they have not usually been included. This type of compound is easily located in the appropriate section of the review.

The compounds have been divided into classes which are presented herein in alphabetical arrangement. Compounds are classified primarily by their functional group, but are also listed under other headings appropriate to the groups which they contain. For instance, stearamidomethyl pyridinium chloride appears under both "Quaternary Pyridinium Compounds" and "Amides"; and stearamido hydroxy acetaldehyde appears under "Alcohols," "Amides," and "Aldehydes."

A reference marked with an asterisk (*) is one in which the subject compound is the water-repellent agent, that is, reacts either with the textile material or with itself to produce water repellency. Unmarked references are those in which the subject compound is used as a starting material or intermediate.

*Imparting Water Repellency to Textiles by Chemical Methods:
A Review of the Literature, H.A. Schuyten, J.David Reid, J.W.
Weaver, and John G. Frick, Jr. Submitted for publication in
the Textile Research Journal.

I. ACIDS

A. Organic

- Abietic acid, 26, 159, 266. •
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Alkylphenoxy acetic acid, 253.
Ammelide, 139.
Ammeline, 139.
Arachidic acid, 277.
Azelaic acid, 260.
- Benzoic acid, 202*, 253, 270, 278.
Brassic acid, 266.
Bromacetic acid, 16, 17, 68.
2-Bromo lauric acid, 253.
Butoxy acetic acid, 253.
Butyl phenyl acetic acid, 253.
Butyric acid, 77, 253, 270, 278.
iso Butyric acid, 77, 270.
- Capric acid, 119, 184, 248, 250, 278.
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 α -Carbomethoxyaminostearic acid, 13.
N-Carbomethoxy-N-octadecyl glycine, 13.
m-Carboxybenzenesulfonyl chloride, 280, 281.
3-Carboxybenzenesulfonyl chloride, 1.
2-Carboxy-N-dodecyl-benzamide, 1*.
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Ceroto hydroxamic acid, 198.
Chloracetic acid, 16, 17, 253, 268.
Chlorobenzoic acid, 253.
5-Chlormethyl-2-hydroxybenzoic acid, 112.
4-Chlorophthallic acid, 279.
 α -Chloropropionic acid, 16, 17.
 β -Chloropropionic acid, 16, 17, 253. •
Cyanuric acid, 139.
Cyclohexane diacetic acid, 69.
 ω -Cyclohexyl dodecanohydroxamic acid, 198.
- Dibutylaminoacetic acid, 163, 235, 236.
Dichloroacetic acid, 16, 17, 253.
 γ -Diethylamino butyric acid, 163, 236.
Diglycollic acid, 253.
Dimethyl aminoacetic acid, 16, 163, 235, 236, 253.
 α -Dimethylamino propionic acid, 163, 235, 236.
2-Dimethylamino stearic acid, 253.
3-N-Decyl-sulfamyl benzoic acid, 1*.

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Fumaric acid, 128, 151.
Furoic acid, 270.

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Glycolic acid, 83, 85, 137, 176, 253, 268, 269.

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Heneicosanedioic acid, 260.
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Heptadecanedioic acid, 260.
Hexadecanedioic acid, 260.
3-N-Hexadecyl-sulfamyl benzoic acid, 1*.
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p-Hexyl benzoic acid, 278.
Hydroabieto hydroxamic acid, 198.

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Lauric acid, 119, 184, 248, 250, 253, 270, 278, 318.
Lauryl hydroxamic acid, 198, 278.

Maleic acid, 128, 146, 151.
Malonic acid, 260.
Methacrylic acid, 270.
 β -Methyladipic acid, 260.
Methylol carbamate glycolic acid ether, 83*.
Montanic acid, 26, 68, 159, 248, 250, 251, 253, 266.
Morpholino acetic acid, 163, 236.
Myristic acid, 248, 250, 277.
Myristo hydroxamic acid, 198.

Naphthenic acid, 159, 266, 270, 278.
Naphthoic acid, 253.
Nicotinic acid, 270.
Nonadecanedioic acid, 260.

Octadecanedioic acid, 260.
Octadecoxy acetic acid, 176.
Octadecoxy betaine, 163.

Octadecoxymethyl dimethylaminoacetic acid, 28.
5-Octadecoxymethyl-2-hydroxy benzoic acid, 112.
Octadecoxy piperidino betaine, 163.
3-N-octyl-sulfamyl benzoic acid, 1*.
Oleic acid, 26, 80, 94, 119, 129, 142, 143, 184, 248, 250, 253, 266, 270, 277, 318.
Oleio hydroxamic acid, 198.
Oxalic acid, 14, 15, 24, 89, 91, 169, 260, 320.

Palmitic acid, 68, 80, 112, 119, 159, 184, 228*, 248, 250, 255, 277, 318.
Palmito hydroxamic acid, 198.
Palmitoleio hydroxamic acid, 198.
Pelargonic acid, 248, 250.
Pentadecanedioic, 260.
Phenoxy acetic acid, 253, 279.
Phenylacetic acid, 253.
 β -Phenyladipic acid, 260.
Phthalic acid, 89, 91, 253, 255, 268, 269, 279, 320.
Pimelic acid, 260.
Piperidino acetic acid, 163, 235, 236.
Polyacrylic acid, 233.
Propionic acid, 77, 270, 278.

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Ricinoleic acid, 64, 129, 253.

Salicylic acid, 253, 268, 269.
Sarcosine, 176.
Sebacic acid, 69, 260.
Stearamido-methoxy glycolic acid, 83*.
Stearamido-methyl glycolic acid, 81.
Stearic acid, 1, 7, 9, 10, 26, 68, 80, 112, 119, 142, 143, 159, 168, 184, 217*, 228*, 248, 250, 253, 255, 265, 270, 277, 318.
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Stearyl aminoacetic acid, 176.
Stearyl glycolic acid, 176.
Suberic acid, 260.
Succinic acid, 253, 255, 260.
Sulpho-oleic acid, 67.

Tartaric acid, 20, 97, 100, 108, 146, 268, 269, 326, 327, 329, 330.
Tetradecanedioic acid, 260.
Toluic acid, 278.
Tridecanedioic acid, 260.

Urethane N-acetic acid, 178.

Valeric acid, 278.
iso Valeric acid, 278.

B. Inorganic

Amido-methylene-phosphonic acid, 5, 81*.

Ceryl sulfuric acid, 113.

Cetyl sulfonic acid, 66, 67, 263.

Dodecyl sulfuric acid, 113.

Hexadecyl sulfuric acid, 113.

Hydroxy-ethyl sulfonic acid, 83.

Hydroxy-methyl phosphonic acid, 83.

2-Hydroxy-propane phosphonic acid, 83.

Octadecenyl sulfuric acid, 113.

Octadecyl sulfuric acid, 113.

Stearamidomethyl phosphonic acid, 81*, 82*, 83, 241.

Sulfanilic acid, 268, 269.

Sulfuric acid, 326, 329.

p-Toluenesulfonic acid, 14, 15, 24, 169.

II. ACID ANHYDRIDES

A. Simple Anhydrides and Inner Anhydrides

Acetic anhydride, 24, 25, 49, 68, 77, 157, 217, 223, 229, 268, 270, 298, 323.

Anhydro-N-carboxy-N-octadecyl glycine, 13*.

Benzoic anhydride, 68, 160*, 202*.

Bromacetic anhydride, 68.

Butyric anhydride, 161*, 199.

Capric acid anhydride, 129.

Chloracetic anhydride, 68.

Cyanacetic anhydride, 68.

Diglycollic anhydride, 154, 157.

Lauric anhydride, 72*, 129, 199, 222*, 223*.

Maleic anhydride, 118, 145, 146, 150, 163, 233, 234.

Montanic acid anhydride, 129.

Myristic acid anhydride, 129.

Naphthenic anhydride, 160*, 202*, 271*.

N-octadecyl isatoic anhydride, 115*, 140*, 159.

Oleic anhydride, 72*, 129, 223*.

Palmitic anhydride, 54*, 70*, 129, 221*, 222*, 223*, 226*.
Pentadecylene maleic anhydride 130.
Pentadecylene succinic anhydride 130.
iso Pentadecenyl Succinic anhydride 118*, 145*.
Phthalic anhydride, 1, 154, 157, 268.

Ricinoleic acid anhydride, 129.

Stearic anhydride, 54*, 70*, 71*, 129, 192, 196*, 199, 222*, 223*,
224*, 225*, 226*, 227*, 229, 230*, 298, 299*, 305.
Succinic anhydride, 154, 157.
Sulfur dioxide, 4, 5, 8, 21, 62, 88, 89, 91, 170, 320.
Sulfur trioxide, 14, 15, 24, 62, 169.

II. ACID ANHYDRIDES

B. Mixed Anhydrides

Acetyl palmitic anhydride, 54*.
unsym. Adipic acid cetyl ester carbonic acid ethyl ester anhydride,
175*.

unsym. Behenic acid carbonic acid methyl ester anhydride, 175*.

N-Chloropyridiniummethylcarbamic stearic anhydride, 21*.

Didodecoxy isoamyl silicon acetate, 19*.
Didodecoxy silicon diacetate, 19*.
Dioctadecoxy propoxy silicon acetate, 19*.
Dodecenyl succinic anhydride, 118*.
Dodecoxy dioctoxy silicon stearate, 19*.
Dodecoxy diphenyl silicon acetate, 19*.
Dodecoxy silicon triacetate, 19*.
Dodecyl diphenyl silicon acetate, 19*.

Lauropropionic anhydride, 255.

Naphthenic acid carbonic acid methyl ester anhydride, 175*.
iso Nonyl succinic anhydride, 118*.

n-Octadecenyl succinic anhydride, 118*, 145*.
Octadecoxy dodecoxy propoxy silicon acetate, 19*.

Palmitic butyl-carbonic anhydride, 106*, 175*.
Palmityl-adipic ethyl-carbonic anhydride, 106*.

Stearic ethyl-carbonic anhydride, 106*, 175*.
Stearic palmitic anhydride, 72*, 223*.
Stearoacetic anhydride, 255*.

Tridodecoxy silicon acetate, 19*.
Tridodecoxy silicon formate, 19*.
Tridodecyl silicon acetate, 19*.
Trimyriciloxy silicon acetate, 19*.
Trioctadecoxy silicon acetate, 19*.
Trioctoxy silicon acetate, 19*.

III. ACID HALIDES

A. Organic Acid Halides

Acetyl chloride, 9, 10.

Adipic acid dichloride, 94.

2-Amyl tetradecanoyl chloride, 259.

Behenic acid ethyl carbamic acid chloride, 316*.

Behenyl chloride, 256, 258.

Benzoyl chloride, 160*, 202*.

2-Butyl dodecanoyl chloride, 259.

Butyryl chloride, 161*, 262.

2-(3-Carboethoxy butyl)dodecanoyl chloride, 259.

δ -Carbomethoxy pentanoyl chloride, 262.

Chloracetyl chloride, 122.

p-Chlorbenzoyl chloride, 160*, 202*.

2-Chloro-5-nitrobenzoyl chloride, 264.

Cyclohexyl-acetyl chloride, 261.

2-(4-Cyclohexyl butyl) dodecanoyl chloride, 259.

Decanoyl chloride, 256, 258, 262.

Decyl benzoyl chloride, 256.

4-(Dimethylamine) butanoyl chloride, 262.

Docosanoyl chloride, 261.

Dodecanoyl chloride, 7, 10, 154, 168, 186*, 189*, 191, 255, 256, 258, 261, 262.

Eicosanoyl chloride, 261.

Ethyl adipyl chloride, 260.

2-Ethyl tetradecanoyl chloride, 259.

Furoyl chloride, 160*, 202*.

Furyldecanoyl chloride, 261.

10-Furyldecanoyl chloride, 262.

Hendecanoyl chloride, 261.

Heptadecanoyl chloride, 261.

2-(Δ^8 -Heptadecyl) Δ^{10} octadecenoyl chloride, 259.

n-Heptanoyl chloride, 262.

2-Heptylnonanoyl chloride, 259.

Hexacosanoyl chloride, 261.

Hexadecanoyl chloride, 261, 262.

Hexadecylbenzoyl chloride, 256.

Hexadecyl carbamic acid chloride, 131*, 135*, 147.

n-Hexanoyl chloride, 161*, 262.

2-Hexyl decanoyl chloride, 259.

5-Keto octanoyl chloride, 262.

Linoleyl chloride, 262.

Methoxy benzoyl chloride, 160*, 202*.
2-(2-Methoxy ethyl) hexadecanoyl chloride, 259.
3-Methyl butanoyl chloride, 262.
Montanic acid carbamic acid chloride, 316*.
Montanoyl chloride, 109, 306*, 325, 326, 329.

Naphthenoyl chloride, 160*, 264, 271*.
Nitrobenzoyl chloride, 160*, 202*.
m-Nitrobenzoyl chloride, 103, 264.
o-Nitrobenzoyl chloride, 264.
Nonadecanoyl chloride, 261.
n-Nonanoyl chloride, 262.

n-Octadecanoyl bromide, 262.
Octadecanoyl chloride, 7, 9, 10, 71*, 72*, 102, 109, 110, 168, 176,
184*, 186*, 189*, 190*, 191, 196*, 221*, 224*, 225*, 230*, 255, 256,
258, 261, 262, 305, 314, 325, 326, 329.
9,10-Octadecenoyl chloride, 262.
Octadecen-9-oyl chloride, 261.
p-Octadecoxy phenacyl chloride, 265.
Octadecyl carbamic acid chloride, 147.
2-Octadecyl octadecanoyl chloride, 259.
Octadecyl thiocarbamic acid chloride, 147.
n-Octanoyl chloride, 161*, 262.
2-Octyl decanoyl chloride, 259.
p-Octyl phenyl thiocarbamic acid chloride, 131*, 135*, 147.
Oleyl chloride, 184*, 189*, 191, 255.
Oxalyl chloride, 94.

Palmityl chloride, 189*, 191, 255, 256, 257, 258, 314.
N-Palmityl-N-methyl carbamic acid chloride, 314*, 316*.
Pentadecanoyl chloride, 261.
4-Phenoxy butanoyl chloride, 261, 262.
3-Phenyl propanoyl chloride, 261.
Phthaloyl chloride, 160*, 202*.
Propanoyl chloride, 262.

p-Stearoxy-benzoic acid chloride, 326, 329.
N-Stearyl-N-butyl carbamic acid chloride, 134*, 316*.
N-Stearyl carbamic acid chloride, 316*.
Succinyl chloride, 161*.

Tetradecanoyl chloride, 261, 262.
p-Toluyyl chloride, 160*, 202*.
Trichloroacetyl chloride, 161*.
5-(2,3,5-trichlorophenoxy) pentanoyl chloride, 262.
Tridecanedioyl dichloride, 260.
Tridecanoyl chloride, 261.

Undecanoyl chloride, 325.

Valeryl chloride, 161*.

III. ACID HALIDES

B. Inorganic Acid Halides

p-Acetamino benzenesulfochloride 264.

Benzene-1,3-disulfonyl dichloride 56.

Benzene sulfonyl chloride, 202*, 160*.

Butane-1,4-disulfonyl chloride, 56.

m-Carboxy benzenesulfonyl chloride, 280, 281.

3-Carboxy benzenesulfonyl chloride, 1.

Chloracetamido-methylphosphone dichloride, 81*.

Cyanogen chloride, 86.

Cyclohexane-1,3-disulfonyl chloride, 56.

Decane-1,10-disulfonyl chloride 56.

Dodecane-1,12-disulfonyl chloride 56.

Eicosane-1,20-disulfonyl chloride, 56.

1,2-Ethane disulfonyl chloride, 56.

Hendecane-1,11-disulfonyl chloride, 56.

Heneicosane-1,21-disulfonyl chloride, 56.

Hentricontane-1,31-disulfonyl chloride, 56.

Heptadecane-1,17-disulfonyl chloride, 56.

Heptane-1,7-disulfonyl chloride, 56.

Hexadecane-1,16-disulfonyl chloride, 56.

Hexane-1,6-disulfonyl chloride, 56.

Methane disulfonyl chloride, 56.

2-Methylhexane-1,6-disulphonyl chloride, 56.

1-Nitronaphthalene-5-sulfochloride, 264.

2-Nitrotoluene-4-sulfochloride, 264.

Nonadecane-1,19-disulfonyl chloride, 56.

Nonane-1,9-disulfonyl chloride, 56.

Octadecane-1,18-disulfonyl chloride, 56.

1,8-Octamethylene disulfonyl chloride, 56.

Octane-1,8-disulfonyl chloride, 56.

Pentadecane-1,15-disulfonyl chloride, 56.

Pentane-1,5-disulfonyl chloride, 56.

2-Phenylhexane-1,6-disulfonyl chloride, 56.

Phosgene, 94, 103, 176, 196, 248, 249, 252, 266, 314.

Phosphorus oxychloride, 196, 323.

Phosphorus pentachloride, 56, 196, 255.

Phosphorus tribromide, 56, 81, 82.

Phosphorus trichloride, 56, 76, 81, 82, 196, 255, 258, 323.

Propane-1,3-disulfonyl chloride, 56.

Stearamidomethyl phosphone dibromide, 81*.

Sulfonyl chloride, 318.

Sulfur chloride, 205, 208, 209, 210, 212, 214.

Sulfuryl chloride, 196.

Tetradecane-1,14-disulfonyl chloride, 56.
Thionyl chloride, 13, 56, 76, 176, 184, 196, 197, 201*, 205, 206*,
208, 209, 210, 212, 214, 216*, 255, 323.
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III. ACID HALIDES

C. Ester Halides of Carbonic Acid

Amyl chlorocarbonate, 134*, 306*.
Benzyl chlorocarbonate, 134*, 306*.
Butyl chlorocarbonate, 134*, 306*.
Cyclohexyl chlorocarbonate, 134*, 306*.
Dodecyl chlorocarbonate, 104*, 134*, 306*.
Hexadecyl chlorocarbonate, 104*, 134*, 306*.
Hexyl chlorocarbonate, 134*, 306*.
Myristyl chlorocarbonate, 134*, 306*.
Nonocosyl chlorocarbonate, 134*.
Octadecanediol chlorocarbonate, 306*.
Octadecyl chlorocarbonate, 104*, 109, 110, 134*, 141, 249, 251, 252,
306, 325, 326, 329.
Octyl chlorocarbonate, 134*, 306*.
Oleyl chlorocarbonate, 134*, 306*.

IV. ALCOHOLS

A. Alcohols

Abietyl alcohol, 151.
Allyl alcohol, 33, 35, 123.
Amyl alcohol, 2, 64, 80, 141, 320, 321, 322.
iso Amyl alcohol, 2, 320, 321, 322.
Benzyl alcohol, 35, 64, 80, 85, 123, 141, 320.
Bigesimethylene glycol, 56.
N,N'-Bis(hydroxy methyl)ethylene thiourea, 123*.
N,N'-Bis(hydroxy methyl)ethylene urea, 123*.
Butoxy ethyl alcohol, 33, 35, 123.
Butyl alcohol, 2, 8, 33, 35, 64, 65, 80, 123, 133, 141, 170, 320,
321, 322.
iso Butyl alcohol, 2, 35, 123, 320, 321, 322.
tert. Butyl alcohol, 123.
n-Butyldiethanolamine, 129.
Butylphenoxy ethanol, 33.
p-Butyl phenyl butanol, 16, 17, 253.

Capryl alcohol, 29, 35.
Cellulose triethanolamine phthalate, 297*.
Ceryl alcohol, 150, 249, 251, 252.
Cetyl alcohol, 8, 29, 33, 35, 64, 89, 91, 141, 151, 167, 170,
234, 249, 251, 252, 266, 277.
Cyclohexanol, 2, 64, 65, 80, 85, 123, 141, 322.
Cyclohexyldiethanolamine, 129.

Decyl alcohol, 2, 29, 35, 249, 251, 252, 320, 321, 322.
Dibutanolamine, 129.
Dicapryl alcohol, 29, 30, 35.
Dichlorooctadecanediol, 17, 253.
9,10-Dichlorooctadecanol, 16.
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156, 157, 163, 233, 282, 313, 320, 321.
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141, 151, 170, 234, 249, 251, 252, 253, 311, 320, 321, 322.
isoDodecylcyclohexyl hydroxy acetamide, 16, 253.
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Ethoxy ethoxy ethanol, 33.
Ethoxy ethyl alcohol, 33, 35, 123.
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Ethyl alcohol, 2, 29, 33, 34, 35, 64, 80, 85, 123, 260, 320,
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Ethylene chlorohydrin, 73.
Ethylene glycol, 80, 83, 85, 91.
2-Ethyl hexanol-1, 320, 321.
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Furfurol, 64, 65.
Furfurol cyclohexanol, 64.

Glycerol, 80.
Glycol cellulose, 250.
Glycolic acid, 83, 85, 137, 176, 253, 268, 269.

Heptamethylene glycol, 56.
Hexadecyl alcohol, 16, 30, 285, 311.

Hexahydrobenzyl alcohol, 35.
Hexamethylene glycol, 56.
Hexyl alcohol, 64, 141.
 β -Hydroxy ethyl alcohol, 123.
Hydroxyethylmorpholine, 129.
 β -Hydroxyethyl stearate, 249, 251, 252.
Hydroxy-ethyl sulfonic acid, 83.
Hydroxy-methyl phosphonic acid, 83.
N-Hydroxymethyl pyridinium chloride, 245.
2-Hydroxy-propane-phosphonic acid, 83.
12-Hydroxystearamide, 34.
Hydroxy stearic acid chloromethyl amide, 153, 154.

Lactic acid, 34, 64, 83, 137, 146, 153, 268, 269.
Lauryl alcohol, 64, 65, 176, 320.

Methallyl alcohol, 33, 35.
Methoxy ethyl alcohol, 123.
Methoxy methyl alcohol, 123.
Methoxy propyl alcohol, 33.
Methyl alcohol, 2, 8, 29, 33, 35, 64, 80, 85, 89, 123, 170, 320, 321, 322.
Methyl-diethanol amine, 10, 120.
N,N'-Methylene-bis(octadecyl-carbamido-methanol), 241*.
N,N'-Methylene-bis(stearamido-methanol), 241*.
4-Methyl heptanol-1, 320.
3-Methyl hexamethylene glycol, 56.
4-Methyl hexanol-1, 320.
N-Methylol acetamide, 81, 279.
N-Methylol benzamide, 81, 83, 85, 278, 279.
N-Methylolbutyramide, 279.
N-Methylol caprylamide, 323.
N-Methylol chloracetamide, 81.
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isoQuinoline, 56, 67, 260, 279, 311.

Stearamidomethyl piperidine, 120.

N-Tetramethyl-hexamethylenediamine, 154.

Tetramethylol melamine, 2, 320, 322.

Trimethoxy trimethyl melamine, 320, 321.

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VIII. AMINES

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o-Hydroxybenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-bromo-5-phenylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-bromo-5-tert.butylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-chlorobenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-chloro-5- $\alpha,\alpha,\gamma,\gamma$ -tetramethylbutylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3,5-dichlorobenzyl dimethyl amine oxide, 48*.
2-Hydroxynaphthylmethyl dimethyl amine oxide, 48*.
2-Hydroxy-5-tert.butylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3,5,6,-trichlorobenzyl dimethyl amine oxide, 48*.

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Pyridine nitrate, 6, 14, 15, 24, 62, 91, 169.
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Pyridine sulfate, 14, 15, 24, 66, 67, 169, 263.
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Quinoline hydrochloride, 62.

Trimethyl amine hydrobromide, 62.
Trimethyl ammonium m-nitro benzene sulfonate, 120.

IX. ARYL HALIDES

2-Bromo-4-phenyl phenol, 48.
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p-Chlorbenzoyl chloride, 160*, 202*.
Chlorobenzene, 191, 266.
Chlorobenzoic acid, 253.
2-Chloro-5-nitrobenzoyl chloride, 264.
o-Chloro phenol, 48.
1-Chlorophenylene-2,5-diisocyanate, 266.
4-Chlorophthallic acid, 279.
2-Chloro-4- $\alpha,\alpha,\gamma,\gamma$ -tetramethylbutyl phenol, 48.

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Diocadecyl-N,N'-di(chloropyridiniummethyl)-2-chloro-1,4-phenylene dicarbamate, 249*, 252*.

2-Hydroxy-3-bromo-5-phenylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-bromo-5-tert.butylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-chlorobenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3-chloro-5- $\alpha,\alpha,\gamma,\gamma$ -tetramethylbutylbenzyl dimethyl amine oxide, 48*.
2-Hydroxy-3,5-dichlorobenzyl dimethyl amine oxide, 48.
2-Hydroxy-3,5,6-trichlorobenzyl dimethyl amine oxide, 48*.

2-Octadecoxymethyl-4-chlorophenol, 112.

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5-(2,3,5-trichlorophenoxy)pentanoyl chloride, 262.

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Octacosane acid azide, 94, 177*.

Palmitic acid azide, 93, 95, 105, 177, 315.

isoPhthalic acid azide, 266.

Sebacic acid diazide, 266.

Tricarballic acid triazide, 266.

XI. CARBAMATES

A. Carbamates

Anhydro-N-carboxy-N-octadecyl glycine, 13*.

o-Carbamyl benzoguanamine, 302.

α -Carbomethoxyaminostearic acid, 13.

N-Carbomethoxy butyl-aminomethyl chloride, 7*, 9, 10, 108*.

N-Carbomethoxy butyl-aminomethyl pyridinium chloride, 89*, 91*.

N-Carbomethoxy heptadecyl-aminomethyl chloride, 7*, 9, 10, 168*.

N-Carbomethoxy heptadecyl-aminomethyl pyridinium chloride, 4*, 6*, 10*, 21*, 58*, 87*, 89*, 90*, 91*, 171*, 304*, 330*.

N-Carbomethoxy-N-octadecyl glycine, 13.

N-Carbomethoxy undecylaminomethyl chloride, 7*, 9, 10, 168*.

N-Carbomethoxy undecylaminomethyl pyridinium chloride, 4*, 6*, 89*, 91*, 171*.

Carbo-octadecoxy aminomethyl pyridinium nitrate, 62.

Chlormethyl octadecyl carbamate, 17.

N-Chlormethyl octadecyl urethane, 98, 313.

β -N-Dibutyl carbamyl propionoguanamine, 302.

9,10-Dichloro-octadecoxy-N-chlormethyl carbamate, 153.

Di-dodecyl-N,N'-di-(chloropyridinium-methyl)-p-phenylene dicarbamate, 249*, 251*, 252*.

N-Diethyl aminomethyl dodecyl carbamate, 31.

Di-octadecyl-N,N'-di(chlormethyl)-2-chloro-1,4-phenylene dicarbamate, 249, 251.

- Diocetadecyl-N,N'-di(chlormethyl)-ethylene dicarbamate, 249, 251, 252.
- Diocetadecyl-N,N'-di(chlormethyl)-hexamethylene dicarbamate, 249, 251, 252.
- Diocetadecyl-N,N'-di(chlormethyl)-2-methoxy-1,4-phenylene dicarbamate, 249, 251, 252.
- Diocetadecyl-N,N'-di(chlormethyl)-6-methyl-1,3-phenylene dicarbamate, 249, 251, 252.
- Diocetadecyl-N,N'-di(chlormethyl)-1,5-naphthylene dicarbamate, 249, 251, 252.
- Diocetadecyl-N,N'-di(chlormethyl)-phenylene dicarbamate, 249, 251, 252.
- Diocetadecyl-N,N'-di(chloropyridinium-methyl)-2-chloro-1,4-phenylene dicarbamate, 249*, 251*, 252*.
- Di-octadecyl-N,N'-di(chloropyridinium-methyl)-ethylene dicarbamate, 249*, 251*, 252*.
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- Di-octadecyl-N,N'-di(chloropyridinium-methyl)-methylene dicarbamate, 249*, 251*, 252*.
- Di-octadecyl-N,N'-di(chloropyridinium-methyl)-6-methyl-1,3-phenylene dicarbamate, 249*, 251*, 252*.
- Diocetadecyl-N,N'-di(chloropyridinium-methyl)-m-phenylene dicarbamate, 251*.
- Diocetadecyl-N,N'-di(chloropyridinium-methyl)-o-phenylene dicarbamate, 249*, 251*, 252*.
- Diocetadecyl-N,N'-di(chloropyridinium-methyl)-p-phenylene dicarbamate, 249*, 251*, 252*.
- Diocetadecyl-N,N'-di(cyclohexyl-dimethyl-chloro-ammonium-methyl)-p-phenylene dicarbamate, 249*, 251*, 252*.
- Diocetadecyl-N,N'-di(triethyl-chloro-ammonium-methyl)-ethylene dicarbamate, 249*, 252*.
- Diocetadecyl-N,N'-di(triethyl-chloro-ammonium-methyl)-m-phenylene dicarbamate, 249*, 251*, 252*.
- Diocetadecyl-N,N'-di(triethyl-chloro-ammonium-methyl)-p-phenylene dicarbamate, 251*.

Diocetadecyl-N,N'-di(trimethyl-chloro-ammonium-methyl)-ethylene dicarbamate, 249*, 251*, 252*.
Diocetadecyl-N,N'-di(trimethyl-chloro-ammonium-methyl)-m-phenylene dicarbamate, 249*, 252*.
Diocetadecyl ethylene-dicarbamate, 249, 252.
Diocetadecyl-m-phenylene-dicarbamate, 249, 252.
Diocetadecyl-p-phenylene-dicarbamate, 249, 252.
Dodecyl carbamate, 16, 17, 62, 253.
isoDodecyl cyclohexylglycol-N-methyl carbamate, 17, 253..
Dodecyl-N-methyl urethane, 157.
isoDodecylphenyl carbamate, 16, 17, 253.
Dodecylphenyl-N-methyl urethane, 157.

Ethyl N-octadecyl-N-chlormethylcarbamate, 153.

Glycol mono-p-isododecylcyclohexyl ether ethyl-urethane, 154.

Hexadecyl carbamate, 16.
Hydroxy stearamido-N-dodecyl carbamate, 153.

Methoxy-N-octylcarbamypropiono guanamine, 302.
Methyl butyl carbamate, 7, 9, 10, 168.
Methyl heptadecyl carbamate, 6, 7, 9, 10, 154, 168.
N-Methyl-N-hydroxyethyl lauramide methyl-carbamate.
Methylol carbamate glycolic acid ether, 83*.
Methylol dodecyl carbamate, 62.
Methylol hexadecyl carbamate, 81.
Methylol octadecyl carbamate, 62, 81, 82, 83.
Methylol tetradecyl carbamate, 81.
Methyl undecyl carbamate, 7, 9, 10, 168.

Octadecoxyethyl urethane, 132*, 136*.
Octadecyl carbamate, 16, 62, 83, 125, 137, 154, 241, 317.
Octadecyl-N-chlormethyl carbamate, 153, 253.
Octadecyl ethyl urethane, 132*, 136*, 154.
N-Octadecyl-isatoic anhydride, 115*, 140*, 159*.
Octadecyl-N-methyl carbamate, 16, 17, 253.
Octadecyl-N-methyl-N-chlormethyl-carbamate, 153.
Octadecylmethylol carbamate glycolic ether, 83, 84.
Octadecyl-N-methyl-(isothiocurea hydrochloride)carbamate, 153*.
Octadecyl-phenyl carbamate, 81.
p-isoOctylphenyl carbamate, 154.
Octydecyl urethane, 98, 132*, 136*, 154, 157.
o-N-Octylcarbamy benzoguanamine, 302.
p-Octylphenyl-N-chlormethyl carbamate, 253.
N-p-Octylphenyl-N-methyl urethane, 154.

Palmitic acid methyl carbamic acid chloride, 314*, 316*.
Perhydro-abietinol ethyl urethane, 154.
Phenyl carbamate, 81.
 β -N-Phenylcarbamy propionoguanamine, 302.
2(N-Phenylcarbamy propiono)-4-N-phenyl guanamine, 302.

Urethane N-acetic acid, 178.
Urethane N-acetic acid isocyanate, 178*.

XI. CARBAMATES

B. Thiocarbamates

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XII. CYANAMIDES

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sec Amyl cyanamide, 86*.

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Ceryl cyanamide, 86*.

Cetyl cyanamide, 86*.

Decyl cyanamide, 86*.

Dodecoxyethyl cyanamide, 86*.

Dodecyl cyanamide, 86*.

Ethoxypropyl cyanamide, 86*.

2-Ethylhexoxypropyl cyanamide, 86*.

2-Ethylhexyl cyanamide, 86*.

2-Ethylhexylthiopropyl cyanamide, 86*.

Ethylthiobutyl cyanamide, 86*.

Hexyl cyanamide, 86*.

Melissyl cyanamide, 86*.

Montanyl cyanamide, 86*.

Nonyl cyanamide, 86*.

Octadecoxypropyl cyanamide, 86*.

Octadecyl cyanamide, 86*.

Octadecyl thiopropyl cyanamide, 86*.

sec. Octoxybutyl cyanamide, 86*.

Octyl cyanamide, 86*.

isoOctyl cyanamide, 86*.

Oleoxyethyl cyanamide, 86*.

Oleyl cyanamide, 86*.

Oleyl thioethyl cyanamide, 86*.

Stearyl amino cyano diamide, 165.

Stearyl amino cyanuric diamide, 125.

Tetradecoxy butyl cyanamide, 86*.

Tetradecyl cyanamide, 86*.

XIII. CYANATES

A. Thiocyanates

Bicyclic naphthenoxy methyl thiocyanate, 308.

Docosoxy methyl thiocyanate, 308*.

Hexadecoxy methyl thiocyanate, 308.

N,N'-Methylene-bis(stearamido-methylene thiocyanate), 78*, 242*.

Methylene-bis-stearamidomethyl pyridinium thiocyanate, 57.

Methylene-bis(stearamido methyl thiocyanate), 78*, 242*.

Methylene-di(stearamidomethyl-thiocyanate), 57.

N-Methyl stearamido methyl thiocyanate, 78*, 242*.

Octadecandioxy methyl thiocyanate, 308*.

Octadecoxy methyl pyridinium thiocyanate, 97*, 308*.

Octadecoxy methyl thiocyanate, 101, 308*.

Octadecyl carbamide methylene thiocyanate, 78*, 242*.

Stearamido methyl thiocyanate, 78*, 242*.

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B. Isocyanates

Abietinyl isocyanate, 135*.

Butyl isocyanate, 161*.

β -Carbimido ethyl stearate, 28.

Carbimido methyl stearate, 178*.

Carbimido phenyl stearate, 28.

p-Carbimido phenyl stearate, 93*, 95*, 105*, 177*, 178*, 315*.

4-Carboctadecoxy tetrahydrophenyl isocyanate, 178*.

Cetoxyethyl isocyanate, 28.

1-Chlorophenylene-2,5-diisocyanate, 266.

Cholesteryl adipate isocyanate, 94, 178*.

Decyl isocyanate, 93*, 94*, 95*, 105*, 177*, 315*.

Dibromolauryl isocyanate, 131*, 135*, 147.

Docosyl isocyanate, 93*, 95*, 105*, 177*, 315*.

Dodecyl isocyanate, 116*, 147.

Dodecyl methylamino ethyl isocyanate, 28, 131*, 135*, 147.

p-Dodecyl phenyl isocyanate, 28, 131*, 135*, 147.

Dodecyl thiomethyl isocyanate, 178*.

Eicosyl isocyanate, 93*, 95*, 105*, 177*, 315*.

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Heptacosyl isocyanate, 177*.

Heptadecyl isocyanate, 28, 93*, 94*, 95*, 105*, 131*, 177*, 315*.

Hexadecoxyphenyl isocyanate, 178*.

Hexadecyl isocyanate, 93*, 94*, 95*, 105*, 177*, 315*.
Hexadecylmethyl aminoethyl isocyanate, 103*.
Hexyl isocyanate, 199.

N-Methyl stearamidoethyl isocyanate, 28.
N-Methyl stearamidomethyl isocyanate, 178*.
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Napthenyl isocyanate, 94*, 177*.

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Octadecoxyphenyl-4-isocyanate, 24, 94.
p-(N-octadecyl-N-hexadecyl acetamino) phenyl isocyanate, 103*.
Octadecyl isocyanate, 28, 93*, 95*, 105*, 116*, 131*, 140*, 147, 177*
178, 315*.
Octadecyl thioethyl isocyanate, 28, 178*.
Octadecyl thiomethyl isocyanate, 178*.
p-(N-Octadecyl-N-methylamine) phenyl isocyanate, 28.
Octadecylphenyl isocyanate, 135*.
p-Octadecylphenyl isocyanate, 28.
Octadecyl thioethyl isocyanate, 28.

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m-Phenylene diisocyanate, 266.
p-Phenylene diisocyanate, 266.
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Phenyl isocyanate, 160*.

Stearamidomethyl isocyanate, 178*.
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Stearyl glycolic isocyanate, 178*.
Stearyl isocyanate, 135*, 140*, 314*.
Stearylxyethyl isocyanate, 28.
1-Stearylxy phenylene-4-isocyanate, 93*, 95*, 105*, 135*, 176*,
177*, 315.
Stearylxy phenyl isocyanate, 28.

Toluylene-2,4-diisocyanate, 266.

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Decamethylene diisothiocyanate, 116*.
Dodecyl isothiocyanate, 116*.
Heptadecyl isothiocyanate, 135*, 147.

9,10-Octadecenyl isothiocyanate, 116*.
Octadecyl carbamide methylene isothiocyanate, 78*, 242*.
Octadecyl isothiocyanate, 116*, 135*, 147.
Octyl isothiocyanate, 116*.

m-Phenylene diisothiocyanate, 266.
o-Phenylene diisothiocyanate, 266.
p-Phenylene diisothiocyanate, 266.

Stearamidomethyl isothiocyanate 78*, 242*.

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1,2,4-Dioxazole, 261.
1,3,2,-Dioxazole, 261.
1,3,4-Dioxazole, 261.

XV. ESTERS

A. Organic Esters

n-Butyl methacrylate, 57.
Butylphthalyl butylglycolate, 57.

2-(3-Carbethoxy butyl) dodecanoyl chloride, 259.
 β -Carbimido ethyl stearate, 28.
Carbimido methyl stearate, 178*.
Carbimido phenyl stearate, 28.
p-Carbimido phenyl stearate, 93*, 95*, 105*, 177*, 178*, 315*.
N-Carbomethoxy-N-octadecyl glycine, 13.
 δ -Carbomethoxy pentanoyl chloride, 262.
Cetyl adipic ethylcarbonic anhydride, 175*.
Cholesteryl adipate isocyanate, 94, 178*.
Chlormethyl acetate, 67.
Chlormethyl palmitate, 255.
Chlormethyl stearate, 255, 291.

Diamyl lactate, 57.
Dibutoxyethyl phthalate, 57.
Dihexadecyl maleate, 150, 233, 234.
Dioctadecyl maleate, 151*.
Dodecyl aminoacetate, 176.
Dodecyl maleate, 146, 150, 233, 234.

1-Epoxy propyl stearate, 265*.
Ethyl acetate, 76, 249, 252.
Ethyl adipyl chloride, 260.
Ethyl chloracetate, 120, 176.
Ethyl dibutylaminoacetate, 235.
Ethyl glycolate, 83, 85.

Ethylidene diacetate, 66, 67, 263.

Ethyl lactate, 83.

Ethyl morpholinoacetate, 235.

Formyl methyl stearate, 96*, 176*.

Hydrogenated ethyl abietate, 305.

o-Hydroxy benzoic acid laurate, 59*.

o-Hydroxy benzoic acid stearate, 59*.

p-Hydroxy benzoic acid stearate, 59*.

β -Hydroxyethyl stearate, 249, 251, 252.

3-Hydroxy-2-Naphthoic acid stearate, 59*.

Lauryloxybenzyl dimethylbenzyl ammonium chloride, 47*.

Methyl γ -diethylaminobutyrate, 235.

Methyl dimethylaminoacetate, 235.

Methyl α -dimethylaminopropionate, 163, 235.

Methyl maleate, 146, 150, 233, 234.

Methyl methacrylate, 57, 150, 233, 234.

Methyl piperidinoacetate, 163, 235.

Methyl γ -piperidinovalerate, 235.

Montanyl acrylate, 151*.

Montanyl m-aminobenzoate, 264.

Naphthenyloxy ammonium chloride, 47*.

2-Nitrobutyl laurate, 247*.

2-Nitro-isobutyl laurate, 247*.

2-Nitrobutyl palmitate, 247*.

2-Nitro-isobutyl palmitate, 247*.

2-Nitrobutyl stearate, 247*.

2-Nitro-isobutyl stearate, 247*.

2-Nitro-2-methyl-1,3-propanediol dipalmitate, 247*.

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2-Nitro-2-methyl-1,3-propanediol monostearate, 247*.

Octadecylallophanate, 61, 78, 242, 317.

Octadecyl p-aminobenzoate, 264.

Octadecyl β -bromopropionate, 151*.

Octadecyl 5-formyl-valerate, 96*, 176*.

Oleoxybenzyl dimethylbenzyl ammonium chloride, 47*.

Palmitamidomethyl acetate, 77*, 200*, 270*.

Palmityladipicethylcarbonic anhydride, 106*.

Polymeric-n-butyl methacrylate, 57.

Stearamidomethyl acetate, 77*, 200*, 270*.

Stearylloxymethyl triethanol ammonium chloride, 255*.

Triethyl citrate, 57.

Trimethylolphenol tetra-acetate, 49.

Vinyl acetate, 57, 150, 233, 234.

Vinyl laurate, 233.

Vinyl palmitate, 150, 233, 234.
Vinyl stearate, 146, 150, 233, 234.

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B. Inorganic Esters

Allyl octadecyl sulfone, 265.
1-Aminonaphthalene-6-cetyl sulfone, 264.
1-Aminonaphthalene-7-cetyl sulfone, 264.

Behenic methylcarbonic anhydride, 175*.

Cetyl adipic ethyl carbonic anhydride, 175*.

Dibutyl dipropoxy silane, 126.

Dicetyl carbonate, 132*, 136*.
Didodecoxy isoamyl silicon acetate, 19*.
Didodecoxy silicon diacetate, 19*.
Didodecoxy silicon dichloride, 19.
Didodecyl carbonate, 132*, 136*.
Diethyl diethoxy silane, 126.
Diethyl dimethoxy silane, 126.
Dimethyl diethoxy silane, 126.
Dimethyl dimethoxy silane, 126.
Dimethyl sulfate, 120.
Dioctadecoxy propoxy silicon acetate, 19*.
Dioctadecyl carbonate, 132*, 136*.
Dioleoyl carbonate, 132*, 136*.
Dipropyl diethoxy silane, 126.
Dodecoxy dioctoxy silicon chloride, 19.
Dodecoxy dioctoxy silicon stearate, 19*.
Dodecoxy diphenyl silicon acetate, 19*.
Dodecoxy diphenyl silicon chloride, 19.
Dodecoxy silicon triacetate, 19*.
Dodecoxy silicon trichloride, 19.
Dodecyl sulfate, 37.
Dodecyl sulfone, 151*.
Dodecyl vinyl sulfone, 151*.

1-Epoxypropyl octadecyl sulfone, 265*.

Hexadecyl adipic ethylcarbonic anhydride, 106*.
Hexadecyl sulfate, 37.

Lauryl methyl diethoxy silane, 126.
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Methyl-p-toluene sulfonate, 120.

Naphthenic methylcarbonic anhydride, 175*.
2-Naphthol-3,6-disulfonic acid stearate, 59*.

Octadecoxy dodecoxy propoxy silicon acetate, 19*.
Octadecoxy dodecoxy propoxy silicon chloride, 19.
Octadecyl ethyl carbonate, 132*, 136*.
Octadecyl sulfate, 37.
Oleyl diethyl ethylene diamine dimethyl sulfate, 113.

Palmitic butylcarbonic anhydride, 106*, 175*.
Phenyl methyl diethoxy silane, 126.
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Stearic ethylcarbonic anhydride, 106*, 175*.

Tetradecyl sulfate, 37.
Tricresyl phosphate, 57, 305.
Tridodecoxy silicon acetate, 19*.
Tridodecoxy silicon chloride, 19.
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Trioctadecoxy silicon chloride, 19.
Trioctoxy silicon acetate, 19*.
Trioctoxy silicon chloride, 19.
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C. Cellulose Esters

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Cellulose acetate potassium succinate, 297*.
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Cellulose acetate sodium phthalate, 297*.
Cellulose acetate sodium succinate, 297*.
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Cellulose potassium phthalate, 297*.
Cellulose potassium succinate, 297*.
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XVI. ETHERS

A. Ethers

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Acetal, 67.
Acetimido stearyl ether hydrochloride, 133*.
Acrylimido dodecyl ether hydrochloride, 80*, 133*.
Alkylphenoxy acetic acid, 253.
Allyl-cetyl ether, 265.
Allyloxymethyl β -formyl propyl piperidinium chloride, 35*.
Amino-octadecanol chlormethyl ether, 309.
Amyl chlormethyl ether, 67.
Amyloxymethyl dimethylamine, 29.
Amyloxymethyl heptoxymethyl dimethyl ammonium chloride, 29*.

Benzamidomethanol octyl ether, 83*, 84.
Benzimido dodecyl ether hydrochloride, 133*.
Benzimido octadecyl ether hydrochloride, 133*.
Benzimido octyl ether hydrochloride, 80*, 133*.
Benzyl chlormethyl ether, 35, 67.
Benzylloxymethyl dimethyl β -methyl β -formyl-propyl ammonium chloride, 35*.
Bicyclic naphthenoxy methyl thiocyanate, 308*.
N,N'-Bis (butoxymethyl) ethylene urea, 123*.
N,N'-Bis (methoxymethyl) ethylene urea, 123*.
Butoxy acetic acid, 253.
Butoxy ethyl alcohol, 33, 35, 123.
Butoxymethyl dimethyl β -formyl-octadecyl ammonium chloride, 35*.
Butoxymethyl dodecoxymethyl pyrrolidinium chloride, 29*.
Butoxymethyl pyridinium chloride, 89*, 91*.
Butoxymethyl pyridinium pyridine pyrosulfite, 8*, 170*.
Butoxymethyl pyridinium pyridine sulfite, 8*, 170*.
Butyl chlorethyl ether, 64, 65.
Butyl chlormethyl ether, 11, 31, 35, 64, 66, 67, 235, 263.
Butylphenoxy ethanol, 33.
Butyramidomethyl caproxymethyl dimethyl ammonium chloride, 31*.

Caproxymethyl β -formylethyl diethyl ammonium iodide, 35*.
Capryl chlormethyl ether, 31.
4-Carboctadecoxy tetrahydrophenyl isocyanate, 178*.
Cetoxybenzenesulfonallylamide, 265.
Cetoxyethyl isocyanate, 28.
Cetoxymethyl butoxymethyl dibutyl ammonium chloride, 29*.
Cetoxymethyl butoxymethyl morpholinium chloride, 29*.
Cetoxymethyl dodecoxymethyl dimethyl ammonium chloride, 29*.
Cetoxymethyl hexamethylene tetrammonium bromide, 90*.
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Cetoxymethyl pyridinium hydrogen oxalate, 88*, 90*, 91*.
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Cetoxymethyl pyridinium pyrosulfite, 88*, 89*, 167*.
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Cetoxymethyl pyridinium sulfite, 88*, 89*, 91*, 167*.
Cetoxymethyl triethyl ammonium chloride, 245*, 246*.
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Cetyl-p-aminophenyl ether, 122.
Cetyl chlormethyl ether, 277.
 α -Chlorbutyl isooheptyl ether, 142, 143, 149.
 β -Chlorethoxyethyl ether, 47.
 α -Chlorethyl octyl ether, 142, 143, 149.
4-Chlormethyl anisol, 112.
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Chlormethyl dodecyl ether, 11.
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Cyclohexyl chlormethyl ether, 67, 142, 143, 163.

Decoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.
Decyl chlormethyl ether, 35.
Dibenzyl ether, 128.
Dibutoxyethyl phthalate, 57.
Dibutoxymethyl diethyl ammonium chloride, 29.
Dicapryl chlormethyl ether, 30.
 α, α' -Dichloro dimethyl ether, 284, 286, 288, 289, 290, 295, 309.
9,10-Dichloro-octadecyl chlormethyl ether, 142, 143, 149.
Di(dodecoxymethyl) diethyl ammonium bromide, 29*.
1,1-Diethoxy octadecane, 96*, 176*.
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Dimethylol urea diethyl ether, 196.
Dimethylol urea lauryl methyl ether, 320.
Dimethyl urea monolauryl ether pyridinium chloride, 320*.
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Dioctadecyl-N,N-di(chlormethyl)-2-methoxy-1,4-phenylene dicarbamate,
249, 251, 252.
Docosoxy methyl thiocyanate, 308*.
Dodecoxy ethyl cyanamide, 86*.
Dodecoxymethyl amyloxymethyl morpholinium bromide, 29*.
Dodecoxymethyl bromide, 35.
Dodecoxymethyl dimethylamine, 29.
Dodecoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium bromide, 35*.
Dodecoxymethyl ethoxymethyl dimethyl ammonium bromide, 29*.
Dodecoxymethyl-methyl morpholinium chloride, 142*, 143*.
Dodecoxymethyl pyridinium chloride, 89*, 91*, 245, 246*.
sec. Dodecoxymethyl pyridinium chloride, 89*, 91*.
Dodecoxymethyl pyridinium nitrate, 88*, 172*.
Dodecoxymethyl pyridinium pyridine pyrosulfite, 8*, 170*.
Dodecoxymethyl pyridinium pyridine sulfite, 8*, 170*.

Dodecoxymethyl triethyl ammonium chloride, 245*, 246*.
Dodecoxymethyl trimethyl ammonium chloride, 156*.
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Dodecyl chlormethyl ether, 17, 30, 149, 163, 234, 235, 236.
Dodecylcyclohexyl chlormethyl ether, 142, 143.
Dodecyl diglycolic ether, 163.
Dodecyl diglycol chlormethyl ether, 163, 235, 236.
Dodecyl hydroxyethyl sulfide chlormethyl ether, 235.
Dodecylimido phenyl ether hydrochloride, 133*.
Dodecylphenylbutyl chlormethyl ether, 142, 143.
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Docosoxymethyl pyridinium chloride, 311*.

1-Epoxypropyl hexadecyl ether, 265*.
1-Epoxypropyl-p-2-octyl phenyl ether, 265*.
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2-Ethylhexoxypropyl cyanamide, 86*.
Ethoxy methyl alcohol, 123.
Ethoxymethyl dimethyl β -formyl-propyl ammonium chloride, 35*.
Ethoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.
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Ethyl chlormethyl ether, 31, 35, 67.
Ethylene glycol bis(methyl pyridinium chloride) ether, 89*, 91*.
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2-Ethylhexyl chlormethyl ether, 35.

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Glycol mono-p-isododecylcyclohexyl ether ethyl urethane, 154.

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Hexadcoxymethyl dimethyl methylallyl ammonium chloride, 30*.
Hexadcoxymethyl pyridinium bromide, 311*.
Hexadcoxymethyl pyridinium chloride, 156*.
Hexadcoxymethyl thiocyanate, 308*.
Hexadcoxymethyl triethyl ammonium chloride, 142*, 143*.
Hexadecoxyphenyl amine, 178.
Hexadecoxyphenyl isocyanate, 178*.
Hexadecoxyphenyl thiocarbamide, 122.
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Hexadecyl chlormethyl ether, 29, 30.
Hexadecyl vinyl ether, 151*.

Laurimido butyl ether hydrochloride, 80*.
Laurimido chloroethyl ether hydrochloride, 133*.
Lauroxymethyl pyridinium chloride, 255*.
Lauryl α -chlorethyl ether, 64, 65.

Methallyl chloromethyl ether, 35.
Methalloxymethyl dimethyl- β -methyl- β -formyl-propyl ammonium chloride, 35*.
Methoxy benzoyl chloride, 160*, 202*.
Methoxy ethyl alcohol, 123.
Methoxy methyl alcohol, 123.
Methoxymethyl amyloxymethyl dimethyl ammonium chloride, 29*.
p-Methoxy-N-methyl aniline, 261.
Methoxymethyl methyl cyclohexyl β -formylpropyl ammonium bromide, 35*.
Methoxymethyl octoxymethyl piperidinium chloride, 29*.
Methoxymethyl pyridinium chloride, 89*, 91*, 167*.
Methoxymethyl pyridinium pyridine pyrosulfite, 8*, 170*.
Methoxymethyl pyridinium pyridine sulfite, 8*, 170*.
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Naphthenamidomethyl glycolic ether, 83*, 84.
 α -Naphthyl carbinol chloromethyl ether, 142, 143.

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Octadecenoxymethyl pyridinium nitrobenzoate, 88.
Octadecoxy acetic acid, 176.
Octadecoxy betaine, 163.
Octadecoxy ethyl urethane, 132*, 136*.
Octadecoxymethyl amyloxymethyl dimethyl ammonium chloride, 29*.
4-Octadecoxymethyl anisol, 112.
Octadecoxymethyl benzyl piperidinium chloride, 90*.
2-Octadecoxy methyl-4-chlorophenol, 112.
Octadecoxy methyl dimethyl amino acetic acid, 28.
Octadecoxymethyl dimethyl β -methyl- β -formylpropyl ammonium chloride, 35*.
5-Octadecoxymethyl-2-hydroxy benzoic acid, 112.
Octadecoxymethyl isocyanate, 178*.
Octadecoxymethyl isothiurea hydrochloride, 153*.
Octadecoxymethyl propoxymethyl piperidinium chloride, 29*.
Octadecoxymethyl pyridinium benzene sulfonate, 88*, 172*.
Octadecoxymethyl pyridinium bromide, 311*.
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Octadecoxymethyl pyridinium hydrogen oxalate, 88*, 90*.
Octadecoxymethyl pyridinium iodide, 90*.
Octadecoxymethyl pyridinium nitrate, 88*, 90*.
Octadecoxymethyl pyridinium oxalate, 172*.
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Octadecoxy methyl pyridinium pyrosulfite, 88*.
Octadecoxymethyl pyridinium sulfite, 88*.
Octadecoxymethyl pyridinium thiocyanate, 97*, 308*.
Octadecoxymethyl quinolinium chloride, 89*, 90*, 91*, 245*, 246*.
Octadecoxymethyl thiocyanate, 101, 308*.
Octadecoxymethyl triethanolammonium chloride, 89*, 90*, 91*, 245*, 246*.
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N-Octadecoxyphenyl-N',N'-ethylene urea, 28*.
Octadecoxyphenyl-4-isocyanate, 24, 94.
Octadecoxy piperidino betaine, 163.
Octadecoxypropyl amine, 86.
Octadecoxypropyl cyanamide, 86*.
Octadecoxy-ureidomethyl pyridinium chloride, 61*.
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Oleoxyethyl cyanamide, 86*.
Oleoxymethyl pyridinium chloride, 245*, 246*, 255*.

Palmitoxymethyl bis(hydroxymethyl)-nitromethane, 247*.
Palmitoxymethyl triethyl ammonium chloride, 149*.
Pentabromo stearamidochloroethyl ether hydrochloride, 133*.
Phenoxy acetic acid, 253, 279.
4-Phenoxybutanoyl chloride, 261, 262.
Phenoxyethoxy ethanol, 33.
Phenoxyethoxymethyl β -formylbutyl morpholinium chloride, 35*.
Phenoxy ethyl alcohol, 33.
Phenyl chloromethyl ethyl ether, 64, 65.
Phenyl-(p-octadecoxybenzoyl)ethylene oxide, 265*.
Phenylundecyl chloromethyl ether, 142, 143.
Propoxymethyl hexadecoxymethyl morpholinium chloride, 29*.
Propyl chloromethyl ether, 67.

Stearamidomethoxy glycolic acid, 83*.
Stearamidomethyl diethylene glycol monoether, 83, 84.
Stearamidomethyl ethoxymethyl dimethyl ammonium chloride, 31*.
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Stearimido butyl ether hydrochloride, 133*.
Stearimido ethyl ether hydrochloride, 80*.
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p-Stearoxy benzoyl chloride, 326, 328.
Stearoxycarbamidomethyl pyridinium chloride, 21*.
α-Stearoxyethyl pyridinium chloride, 255*.
Stearoxymethyl bis(hydroxymethyl) nitromethane, 247*.
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Stearoxymethyl pyridinium pyridine pyrosulfite, 21*.
Stearoxymethyl pyridinium pyridine sulfite, 21*.
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Tri-(2'-ethoxy)ethoxymethyl amine, 33*.
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1-Epoxypropyl didodecyl amine, 265*.

N,1-Epoxypropyl-p-hexadecoxybenzene sulfonamide, 265*.
1-Epoxypropyl hexadecyl ether, 265*.
1-Epoxypropyl-p-2-octyl phenyl ether, 265*.
1-Epoxypropyl stearate, 265*.
1-Epoxypropyl tetradecyl ether, 265*.
1-Epoxypropyl tetradecyl sulfide, 265*.
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Furfurol, 64, 65.
Furfurol cyclohexanol, 64.
Furoamide, 270.
Furoic acid, 270.
Furoyl chloride, 160*, 202*.
Furyl- α -chlormethyl cyclohexyl ether, 64, 65.
Furyl decanoyl chloride, 261.
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Phenyl-(p-octadecoxy benzoyl) ethylene oxide, 265*.
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Amyl thiopropyl cyanamide, 86*.

Dodecyl chloromethyl sulfide, 17, 153, 163, 235, 236, 253, 278.
Dodecylthiomethyl isocyanate, 178*.

2-Ethylhexyl thiopropyl cyanamide, 86*.
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Hexadecylmethylchloride thio ether, 311.

Octadecyl chloromethyl sulfide, 153, 235, 311.
Octadecyl thioethyl isocyanate, 28, 178*.
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Acrylimido dodecyl ether hydrochloride, 80*, 133*.

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Di(cetylphenyl)carbodiimide, 122*.

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Dodecylimido phenyl ether hydrochloride, 133*.

N-Dodecyl phthalimide, 1.

Dodecyl succinimide, 154.

N-Ethyl- α -pyridon stearimido acetate, 162.

Hexadecoxy-p-phenyl carbodiimide, 122*.

Hydroxystearimido phenyl ether hydrochloride, 133*.

Laurimido butyl ether hydrochloride, 80*.

Laurimido chloroethyl ether hydrochloride, 133*.

N-Methylol phthalimide, 279.

Montanimido ethyl ether hydrochloride, 133*.

Octadecanamidine, 98.

N-isoOctyl- α -pyridon-octadecyl imide hydrochloride, 162*.

Pentabromostearimido chloroethyl ether hydrochloride, 133*.

Stearimido butyl ether hydrochloride, 133*.

Stearimido ethyl ether hydrochloride, 80*.

Stearimido ethyl thioether hydrochloride, 133*.

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α -Carbethoxybutyl decyl ketene, 259*.

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Cetyl ketene, 69*, 121*.

α -Cyclohexylbutyl decyl ketene, 259*.

Diheptyl ketene, 259*.

Dodecanoyl decyl ketene, 262*.

Ethyl dodecyl ketene, 259*.

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β -Methoxyethyl tetradecyl ketene, 259*.

3-Methylbutanoyl isopropyl ketene, 262*.

Montanyl ketene, 69*, 121*.

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Diheptadecyl ketone, 331.

Di-(dimethylaminomethyl) hydroquinone, 48.

2,4-Dimethyl hexanone-3, 320.

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1,5-Aminonaphthol, 261.
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2-Bromo-4-phenylphenol, 48.
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Butylphenol, 43.

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Chlormethyl-dioctyl phenol, 44, 150.

Chlormethyl-diisooctylphenol, 144.

Chlormethyl-n-dodecyl phenol, 44, 144, 146, 150.

Chlormethyl-isododecyl phenol, 44, 150, 153.

5-Chlormethyl-2-hydroxybenzoic acid, 112.

Chlormethyloctyl phenol, 146.

Chlormethyl-isooctyl phenol, 44.

Chlormethylphenol, 144.

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2-Chloro-4- $\alpha,\alpha,\gamma,\gamma$ -tetramethylbutylphenol, 48.

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2,4-Dichlorophenol, 48.

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Diisohexyl phenol, 125, 138.

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p,p'-Dihydroxy diphenyl sulfone, 48.

Dimethyl aminomethyl- β -naphthol, 48.

Dioctylphenol, 150.

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Dodecyl phenol, 42, 43, 48, 125, 144, 146, 150, 151, 153.

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Ethyl phenol, 48.

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Hexadecyl-hydroxybenzyl-diethylamine, 47.

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2-Hydroxy-3-bromo-5-phenyl-benzyl-dimethyl amine oxide, 48*.

2-Hydroxy-5-tert. butyl-benzyl-dimethylamine oxide, 48*.

2-Hydroxy-3-chloro benzyl dimethyl amine oxide, 48*.

2-Hydroxy-3-chloro-5- $\alpha,\alpha,\gamma,\gamma$ -tetramethyl-butyl benzyl dimethylamine oxide, 48*.

2-Hydroxy-3,5-dichlorobenzyl dimethylamine oxide, 48*.

2-Hydroxy-5-dodecyl tolyl methyl-isothiurea hydrochloride, 153*.

2-Hydroxynaphthyl methyl dimethylamine oxide, 48*.

2-Hydroxy-5-isooctyl-benzamide, 154.

2-Hydroxy-3,5,6-trichlorobenzyl dimethylamine oxide, 48*.

p-Hydroxy stearophenone, 48.

α -Naphthol, 48.

β -Naphthol, 48.

2-Octadecoxy methyl-4-chlorophenol, 112.

5-Octadecoxymethyl-2-hydroxy-benzoic acid, 112.

Octadecylphenol, 47, 48.

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Octylphenol, 43, 146, 265.

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p-Stearamidophenol, 47.

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2,4,5-Trichlorophenol, 48.

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Tri(β , β' -dihydroxy-diethylaminomethyl) phenol, 49.

Tri-(dimethylaminomethyl) phenol, 49.

Tri-(morpholino-methyl) phenol, 49.

Tri-(piperidino-methyl) phenol, 49.

1,2,4-Xylenol, 48.

1,3,5-Xylenol, 48.

XXIV. QUATERNARY COMPOUNDS

A. Quaternary Ammonium Compounds

Amyloxymethyl heptoxymethyl dimethyl ammonium chloride, 29*.

Benzene-1,3-bis(N-docosylsulfonamidomethyl trimethyl ammonium chloride), 56*.

Benzene-1,3-bis(N-eicosylsulfonamidomethyl trimethyl ammonium chloride), 56*.

Benzyloxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.

Bis-stearamidomethyl-tetramethyl-ethylene-diammonium chloride, 76*, 197*.

Butoxymethyl dimethyl β -formyl-octadecyl ammonium chloride, 35*.

Butyramidomethyl caproxymethyl dimethyl ammonium chloride, 31*.

Caproxymethyl β -formyl-ethyl diethyl ammonium iodide, 35*.
Cetoxymethyl butoxymethyl dibutyl ammonium chloride, 29*.
Cetoxymethyl dodecoxymethyl dimethyl ammonium chloride, 29*.
Cetoxymethyl hexamethylene tetrammonium bromide, 90*.
Cetoxymethyl triethyl ammonium chloride, 245*, 246*.
Cetoxymethyl trimethyl ammonium chloride, 89*, 91*.

Decane-1,10-bis(N-isobutylsulfonamidomethyl-dimethyl-cyclohexyl-ammonium chloride), 56*.
Decoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.
Dibutoxymethyl diethyl ammonium chloride, 29.
N,N-Di-(N'-chloro-triethyl-ammoniummethyl)-di-stearyl-diaminomethane, 248*, 250*.
Di(dodecoxymethyl)-diethyl ammonium bromide, 29*.
Di(octadecoxymethyl)-tetramethyl-methylene diammonium dichloride, 142*, 143*, 149*.
Di-octadecyl-N,N'-di-(cyclohexyl-dimethyl-chloro-ammonium-methyl)-p-phenylene dicarbamate, 249*, 251*, 252*.
Di-octadecyl-N,N'-di-(triethylchloroammoniummethyl)-ethylene dicarbamate, 249*, 252*.
Di-Octadecyl-N,N'-di-(triethylchloroammoniummethyl)-m-phenylene dicarbamate, 249*, 251*, 252*.
Di-octadecyl-N,N'-di-(triethylchloroammoniummethyl)-p-phenylene dicarbamate, 251*.
Di-octadecyl-N,N'-di-(trimethylchloroammoniummethyl)-ethylene dicarbamate, 249*, 251*, 252*.
Dodecoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium bromide, 35*.
Dodecoxymethyl ethoxymethyl dimethyl ammonium bromide, 29*.
Dodecoxymethyl triethyl ammonium chloride, 245*, 246*.
Dodecoxymethyl trimethyl ammonium chloride, 156*.
n-Dodecyl phenyl methyl trimethyl ammonium chloride, 233*.
Dodecyl triethyl ammonium hydroxide, 129.

Ethoxymethyl dimethyl β -formyl-propyl ammonium chloride, 35*.
Ethoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.
2-Ethylhexoxymethyl dimethyl β -formyl- β -methyl-propyl ammonium chloride, 35*.

Hexadecoxymethyl dimethyl allyl ammonium chloride, 30*.
Hexadecoxymethyl dimethylbenzyl ammonium chloride, 30*.
Hexadecoxymethyl dimethyl methylallyl ammonium chloride, 30*.
Hexadecoxymethyl triethyl ammonium chloride, 142*, 143*.

Lauryloxybenzyl dimethyl benzyl ammonium chloride, 47*.

Methallyloxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.
Methoxymethyl amyloxymethyl dimethyl ammonium chloride, 29*.
Methoxymethyl methyl cyclohexyl β -formyl-propyl ammonium bromide, 35*.
N-methyl-stearamido-methyl-trimethyl ammonium bromide, 10*.

Naphthenoxybenzyl dimethyl benzyl ammonium chloride, 47*.

Octadecoxymethyl amyloxymethyl dimethyl ammonium chloride, 29*.
Octadecoxymethyl dimethyl β -methyl- β -formyl-propyl ammonium chloride, 35*.
Octadecoxymethyl triethanol ammonium chloride, 89*, 90*, 91*, 245*, 246*.
Octadecoxymethyl triethyl ammonium chloride, 156, 245*, 246*.
Octadecoxymethyl trimethyl ammonium chloride, 97*, 142*, 143*, 311*.
Octadecyl trimethyl ammonium bromide, 57.
Oleoxybenzyl dimethyl benzyl ammonium chloride, 47*.

Palmitoxymethyl triethyl ammonium chloride, 149*.

Stearamidomethyl butoxymethyl dimethyl ammonium chloride, 31*.
Stearamidomethyl diethanol methyl ammonium chloride, 210*.
Stearamidomethyl diethyl methyl ammonium-(methyl-sulfate), 120*.
Stearamidomethyl dimethyl benzyl ammonium chloride, 120*.
Stearamidomethyl dimethyl ethyl ammonium chloride, 120*.
Stearamidomethyl dimethyl ethylol ammonium chloride, 120*.
Stearamidomethyl ethoxymethyl dimethyl ammonium chloride, 31*.
Stearamidomethyl trimethyl ammonium chloride, 120*.
Stearamidomethyl trimethyl ammonium iodide, 120*.
Stearamidomethyl trimethyl ammonium methyl sulfate, 120*.
Stearo-ureido-methyl dimethyl ethyl ammonium chloride, 120*.
Stearoxymethyl triethanol ammonium chloride, 255*.
Stearoxymethyl triethyl ammonium chloride, 97*.
Stearoxymethyl trimethyl ammonium chloride, 234.

Tetraethanol ammonium hydroxide, 129.
Tetramethyl ammonium hydroxide, 129.
Triethyl cetyl ammonium iodide, 113.

See also section VIII F.

XXIV. QUATERNARY COMPOUNDS

B. Quaternary Morpholinium Compounds

Cetoxymethyl butoxymethyl morpholinium chloride, 29*.
Dodecoxymethyl amyloxymethyl morpholinium bromide, 29*.
Dodecoxymethyl methyl morpholinium chloride, 142*, 143*.
Phenoxyethoxymethyl- β -formylbutyl morpholinium chloride, 35*.
Propoxymethyl hexadecoxymethyl morpholinium chloride, 29*.

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C. Quaternary Piperidinium Compounds

Allyloxymethyl- β -formylpropyl piperidinium chloride, 35*.
Methoxymethyl octoxymethyl piperidinium chloride, 29*.

Octadecoxymethyl benzyl piperidinium chloride, 90*.
Octadecoxymethyl propoxymethyl piperidinium chloride, 29*.

Stearamidomethyl benzyl piperidinium chloride, 120*.

See also section VIII F.

XXIV. QUATERNARY COMPOUNDS

D. Pyridinium Quaternary Compounds

Acetamidomethyl pyridinium chloride, 14*, 15*, 24*, 91*, 169*.
Acetoundecylamidomethyl pyridinium chloride, 89*.

Butoxymethyl pyridinium chloride, 89*, 91*.
Butoxymethyl pyridinium pyridine pyrosulfite, 8*, 170*.
Butoxymethyl pyridinium pyridine sulfite, 8*, 170*.
isoButylphenylmethyl pyridinium chloride, 233*.

N-Carbomethoxybutylaminomethyl pyridinium chloride, 89*, 91*.
N-Carbomethoxyheptadecylaminomethyl pyridinium chloride, 4*, 6*, 10*,
21*, 58*, 87*, 89*, 90*, 91*, 171*, 304*, 330*.
N-Carbomethoxyundecylaminomethyl pyridinium chloride, 4*, 6*, 89*,
91*, 171*.

Carbo-octadecoxyaminomethyl pyridinium nitrate, 62.
Cetoxymethyl pyridinium chloride, 21*, 89*, 91*, 97*, 99, 107, 167*,
245*, 246*.

Cetoxymethyl pyridinium hydrogen oxalate, 88*, 90*, 91*.
Cetoxymethyl pyridinium oxalate, 89*, 167*, 172*.
Cetoxymethyl pyridinium pyridine chloride, 90*.
Cetoxymethyl pyridinium pyridine pyrosulfite, 8*, 21*, 90*, 170*.
Cetoxymethyl pyridinium pyridine sulfite, 8*, 21*, 90*, 91*, 170*.
Cetoxymethyl pyridinium pyrosulfite, 88*, 89*, 167*.
Cetoxymethyl pyridinium sulfate, 88*, 172*.
Cetoxymethyl pyridinium sulfite, 88*, 89*, 91*, 167*.

Cetyl pyridinium bromide, 192.

Cetyl pyridinium chloride, 192.

Cetyl pyridinium iodide, 192.

N-Cyclohexyl-lauroamidomethyl pyridinium chloride, 10*.

N,N'-Di-(chloropyridinium-methyl)-distearyl diaminomethane, 248*,
250*.

Di-dodecyl-N,N'-di-(chloropyridinium-methyl)-p-phenylene dicarbamate,
249*, 251*, 252*.

Dimethyl urea monolauryl ether pyridinium chloride, 320*.

Dimethyl urea monooctadecyl ether pyridinium chloride, 320*.

Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-2-chloro-1,4-Phenylene
dicarbamate, 249*, 251*, 252*.

Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-ethylene-dicarbamate,
249*, 251*, 252*.

Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-hexamethylene
dicarbamate, 249*, 251*, 252*.

Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-methylene dicarbamate,
249*, 251*, 252*.

Di-octadecyl-N,N'-di-(chloropyridinium-methyl)6-methyl-1,3-phenylene dicarbamate, 249*, 251*, 252*.
Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-m-phenylene dicarbamate, 251*.
Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-o-phenylene dicarbamate, 249*, 251*, 252*.
Di-octadecyl-N,N'-di-(chloropyridinium-methyl)-p-phenylene dicarbamate, 249*, 251*, 252*.
Docosoxymethyl pyridinium chloride, 97*, 311*.
Dodecoxymethyl pyridinium chloride, 89*, 91*, 245, 246*.
sec. Dodecoxymethyl pyridinium chloride, 89*, 91*.
Dodecoxymethyl pyridinium nitrate, 88*, 172*.
Dodecoxymethyl pyridinium pyridine pyrosulfite, 8*, 170*.
Dodecoxymethyl pyridinium pyridine sulfate, 8*, 170*.
isoDodecylphenylmethyl pyridinium chloride, 233*.

Ethane-1,2-bis-(N-octadecylsulfonamidomethyl pyridinium chloride), 56*.
Ethylene glycol bis(methyl pyridinium chloride) ether, 89*, 91*.

Hexadecoxymethyl pyridinium bromide, 311*.
Hexadecoxymethyl pyridinium chloride, 156*.
Hexadecyl pyridinium bromide, 36*, 37, 113.
Hexadecyl pyridinium sulfate, 113.
Hexane-bis(n-octadecylamidomethylene-pyridinium chloride), 260*.
N-Hydroxymethyl pyridinium chloride, 245.

Laureamidomethyl pyridinium chloride, 4*, 5*, 6*, 14*, 15*, 24*, 169*, 171*.
Laureamidomethyl pyridinium pyridine sulfate, 90*, 92*.
Laureamidomethyl pyridinium sulfate, 4*, 5*, 6*, 171*.
Lauroxymethyl pyridinium chloride, 255*.
Lauryl-pyridine chloride, 192.

Methoxymethyl pyridinium chloride, 89*, 91*, 167*.
Methoxymethyl pyridinium pyridine pyrosulfite, 8*, 170*.
Methoxymethyl pyridinium pyridine sulfite, 8*, 170*.
N-Methyl- α -butyl stearyl amino pyridinium chloride, 162*.
Methylene-bis-stearamidomethyl pyridinium thiocyanate, 57.
N,N'-(Methylpyridinium chloride)-N,N'-tridecane dianilide, 260*.
N-Methyl stearamidomethyl pyridinium chloride, 4*, 5*, 10*, 89*, 90*, 91*, 92*.
Montanamidomethyl pyridinium chloride, 328*.
Myristoxymethyl pyridinium acetate, 88*, 172*.

Octadecenoxymethyl pyridinium nitrobenzoate, 88.
Octadecoxymethyl pyridinium benzenesulfonate, 88*, 172*.
Octadecoxymethyl pyridinium bromide, 311*.
Octadecoxymethyl pyridinium chloride, 11*, 21*, 58*, 87*, 89*, 90*, 91*, 97*, 142*, 143*, 149*, 156*, 167*, 245*, 246*, 304*, 311*, 330*.
Octadecoxymethyl pyridinium hydrogen oxalate, 88*, 90*.

Octadecoxymethyl pyridinium iodide, 90*.
Octadecoxymethyl pyridinium nitrate, 88*, 90*.
Octadecoxymethyl pyridinium oxalate, 172*.
Octadecoxymethyl pyridinium perchlorate, 88*, 172*.
Octadecoxymethyl pyridinium pyrosulfite, 88*.
Octadecoxymethyl pyridinium sulfite, 88*.
Octadecoxymethyl pyridinium thiocyanate, 97*, 308*.
Octadecoxy-ureidomethyl pyridinium chloride, 61*.
Octadecyl pyridinium chloride, 36*, 37, 113, 192.
Octadecyl pyridinium sulfate, 113.
Octoxymethyl pyridinium chloride, 89*, 91*.
isoOctylphenylmethyl pyridinium chloride, 233*.
Oleamidomethyl pyridinium chloride, 4*, 5*, 6*, 14*, 15*, 24*, 89*, 90*, 91*, 92*, 169*, 171*.
Oleoxymethyl pyridinium chloride, 245*, 246*, 255*.

Palmitamidomethyl pyridinium chloride, 4*, 5*, 171*.
Propionamidomethyl pyridinium chloride, 14*, 15*, 24*, 169*.

Stearamidomethoxymethyl pyridinium sulfite, 91.
Stearamido bis(methyl pyridinium chloride), 328*.
Stearamidomethyl pyridinium acetate, 268*, 269*, 323*.
Stearamidomethyl pyridinium bromide, 4*, 5*, 6*, 90*, 92*, 171*.
Stearamidomethyl pyridinium chloride, 3*, 4*, 5*, 6*, 14*, 15*, 24*, 57*, 87*, 89*, 90*, 91*, 92*, 167*, 169*, 171*, 241*, 269*, 323*, 324*, 328*.
Stearamidomethyl pyridinium formate, 268*, 269*.
Stearamidomethyl pyridinium hydrogen sulfate, 4*, 5*, 171*.
Stearamidomethyl pyridinium nitrate, 4*, 5*, 6*, 14*, 15*, 24*, 87*, 90*, 92*, 169*, 171*.
Stearamidomethyl pyridinium-m-nitrobenzenesulfonate, 4*, 5*, 6*, 171*.
Stearamidomethyl pyridinium oxalate, 14*, 15*, 24*, 169*.
Stearamidomethyl pyridinium phosphate, 323*.
Stearamidomethyl pyridinium phthalate, 268*, 269*.
Stearamidomethyl pyridinium pyridine sulfite, 90*, 92*.
Stearamidomethyl pyridinium sulfate, 14*, 15*, 24*, 89*, 90*, 91*, 92*, 169*.
Stearamidomethyl pyridinium sulfite, 4*, 5*, 171*.
Stearamidomethyl pyridinium p-toluenesulfonate, 14*, 15*, 24*, 169*.
p-Stearamidophenylaminomethyl pyridinium pyrosulfite, 89*, 91*.
p-Stearamidophenylaminomethyl pyridinium sulfite, 89*, 91*.
Stearoxycarbamidomethyl pyridinium chloride, 21*.
α-Stearoxyethyl pyridinium chloride, 255*.
Stearoxymethyl pyridinium acetate, 255*.
Stearoxymethyl pyridinium chloride, 99, 107*, 108, 234, 255*.
Stearoxymethyl pyridinium pyridine pyrosulfite, 21*.
Stearoxymethyl pyridinium pyridine sulfite, 21*.
Stearyl-ureidomethyl pyridinium chloride, 61*, 87*.

Tetradecoxymethyl pyridinium chloride, 245*, 246*.
iso Tetradecyl phenyl methyl pyridinium chloride, 233.
iso Tridecyl phenyl methyl pyridinium chloride, 233*.

See also section VIII F.

XXIV. QUATERNARY COMPOUNDS

E. Miscellaneous Quaternary Compounds

Butoxymethyl dodecoxymethyl pyrrolidinium chloride, 29*.

Octadecoxychloromethyl quinolinium chloride, 245*.

Octadecoxymethyl quinolinium chloride, 89*, 90*, 91*, 245*, 246*.

Octadecyl dimethylbenzyl phosphonium hydroxide, 129.

Stearamidomethyl quinolinium chloride, 14*, 15*, 24*, 169*.

See also section VIII F.

XXV. SALTS

A. Organic

Dipotassium urea, 174.

Disodium urea, 174.

Potassium octadecyl dithiocarbamate, 158*.

Potassium urea, 174.

Sodio-N-acetoxy palmitamide, 198*.

Sodio-N-propionoxy palmitamide, 198*.

Sodio-N-propionoxy stearamide, 198*.

Sodium acetate, 30, 21, 87, 89, 91, 97, 107, 250, 257, 260, 288, 290, 304, 312, 313, 326.

Sodium stearyl dithio carbamate, 158*.

Sodium urea, 174.

See also section XV C.

B. Inorganic Salts.

Ammonium thiocyanate, 83.

Potassium cyanate, 97, 108.

Potassium pyrosulfate, 18.

Potassium thiocyanate, 78, 242, 308.

Silver cyanate, 314.

Sodium azide, 176.

Sodium cyanamide, 139.

Sodium tetradecyl sulfate, 113.

XXVI. SILICON DERIVATIVES

isoAmyl silicon trichloride, 19.

Dibutyl dipropoxy silane, 126.

Didodecoxy isoamyl silicon acetate, 19*.

Didodecoxy isoamyl silicon chloride, 19.
Didodecoxy silicon diacetate, 19*.
Didodecoxy silicon dichloride, 19.
Diethyl diethoxy silane, 126.
Diethyl dimethoxy silane, 126.
Dimethyl dichlorosilane, 39*, 40*, 41*, 239*.
Dimethyl diethoxy silane, 126.
Dimethyl dimethoxy silane, 126.
Diocadecoxy propoxy silicon acetate, 19*.
Diocadecoxy propoxy silicon chloride, 19.
Dipropyl diethoxy silane, 126.
Diphenyl silicon dichloride, 19.
Disilicon hexachloride, 195.
Disilicoxyhexachloride, 195.
Dodecoxy dioctoxy silicon chloride, 19.
Dodecoxy dioctoxy silicon stearate, 19*.
Dodecoxy diphenyl silicon acetate, 19*.
Dodecoxy diphenyl silicon chloride, 19.
Dodecoxy silicon triacetate, 19*.
Dodecoxy silicon trichloride, 19.
Dodecyl diphenyl silicon acetate, 19*.
Dodecyl diphenyl silicon chloride, 19.
Dodecyl silicon trichloride, 19.

Lauryl methyl diethoxy silane, 126.
Lauryl methyl dimethoxy silane, 126.

Methyl trichloro silane, 39*, 40*, 41*, 239*.

Octadecoxy dodecoxy propoxy silicon acetate, 19*.
Octadecoxy dodecoxy propoxy silicon chloride, 19.

Phenyl methyl diethoxy silane, 126.
Phenyl methyl dimethoxy silane, 126.

Silicon tetrabromide, 195.
Silicon tetrachloride, 19, 195, 232*.
Silicon tetraiodide, 195.

Tridodecoxy silicon acetate, 19*.
Tridodecoxy silicon chloride, 19.
Tridodecoxy silicon formate, 19*.
Tridodecyl silicon acetate, 19*.
Tridodecyl silicon chloride, 19.
Trimethyl silicon chloride, 232*.
Trimyricoxy silicon acetate, 19*.
Trimyricoxy silicon chloride, 19.
Triocadecoxy silicon acetate, 19*.
Triocadecoxy silicon chloride, 19.
Trioctoxy silicon acetate, 19*.
Trioctoxy silicon chloride, 19.

XXVII. UREA DERIVATIVES

A. Ureas

Acetyl urea, 174*.

Benzoyl urea, 174*.

Benzyl urea, 174*.

N,N'-bis(butoxy methyl)ethylene urea, 123*.

N,N'-bis(hydroxy methyl)ethylene urea, 123*.

N,N'-bis(methoxy methyl)ethylene urea, 123*.

Biuret, 139.

N-Butyl-N'-octadecyl urea, 154.

N-p-Butylphenyl-N'-dibutyl urea, 154.

Butyl urea, 137.

isoButyl urea, 125.

N-Cetyl-N-methyl urea, 61.

Chloromethyl stearyl urea, 313.

Dibenzoyl urea, 174*.

Diethoxy dimethyl urea, 320.

Dimethoxy dimethyl urea, 320, 321.

Dimethylol urea, 97, 98, 108, 133, 146, 147, 148, 150, 153, 156, 157, 163, 233, 282, 313, 320, 321.

sym.Dimethylol urea butyl octyl diether, 320.

Dimethylol urea diethyl ether, 196.

Dimethylol urea lauryl methyl ether, 320, 321.

Dimethylol urea octadecyl methyl ether, 320, 321.

Dimethyl urea monolauryl ether pyridinium chloride, 320*.

Dimethyl urea monostearyl ether pyridinium chloride, 320*.

Diocadecyl urea, 154, 157.

Dipotassium urea, 174.

Disodium urea, 174.

N-Dodecyl-N,N'-ethylene urea, 28*.

N-p-Dodecylphenyl-N,N'-ethylene urea, 28*.

Dodecyl urea, 125, 157.

Ethylene urea, 123.

N-Heptadecyl-N',N'-ethylene urea, 28*.

N-Heptadecyl urea, 61, 317.

Hexyl urea, 278.

Lauryl urea, 61, 195.

Methylol heptadecyl urea, 61.

Methylol urea, 83.

Monododecyl urea, 137.

Monolauryl ether of dimethylol urea, 321.

Monooctadecyl ether of dimethyl urea, 321.

Monooctadecyl urea, 137.

Octadecenyl urea, 154.
N-Octadecoxyphenyl-N',N'-ethylene urea, 28*.
Octadecoxy-ureidomethyl pyridinium chloride, 61*.
Octadecyl chloromethyl urea, 153.
N-Octadecyl-N'-dibutyl urea, 157.
N-Octadecyl-N',N'-ethylene urea, 28*.
Octadecyl heptadecyl urea, 125, 137.
Octadecyl urea, 78, 125, 153, 154, 241, 242.
Octadecyl urea chloride, 135*.
Octadecyl ureido methanol, 83, 85.
Octyl urea, 278.
Oleyl urea, 174*.

Palmitoyl urea, 195.
Phthalyl ureide, 174*.
Potassium urea, 174.

Sodium urea, 174.
Stearo-ureido-methyl dimethyl ethyl ammonium chloride, 120*.
Stearyl urea, 61, 78, 98, 120, 125, 137, 174*, 195, 241, 242, 317.
Stearylureidomethyl pyridinium chloride, 61*, 87*.

Urea, 16, 20, 21, 34, 87, 98, 123, 131, 139, 146, 147, 150, 156, 157,
163, 174, 233, 248, 250, 330.

XXVII. UREA DERIVATIVES

B. Thioureas

Benzyl thiourea, 153.
N,N'-Bis(hydroxy methyl)ethylene thiourea, 123*.
Bis-thiouronium-bis-chloromethylene-distearamidomethane, 3*.
N-Butyl thiourea, 153.

Cetyl phenyl thiourea, 122.
Cyclohexyl butyl thiourea, 157.
Cyclohexyl dimethyl thiourea, 153.

N,N'-Diethyl thiourea, 277, 278, 287.
Diheptyl methyl thiourea, 157.
Dilauryl thiourea, 122.
N,N'-Dimethyl thiourea, 277, 278.
Diphenyl thiourea, 153.

Ethylene thiourea, 153.
N-Ethyl-N'-ethoxy thiourea, 277.
N-Ethyl thiourea, 153, 278.

Hexadecy-allyl thiourea, 122.
Hexadecyphenyl thiourea, 122.
2-Hydroxy-5-dodecyltolylmethyl-isothiourea-hydrochloride, 153*.

N-Methyl thiourea, 277, 278.
Monothiobiuret, 277.

Octadecoxymethyl isothiurea hydrochloride, 153*.
Octadecyl-N-methyl-(isothiurea hydrochloride)carbamate, 153*.
S-p-Octylphenoxy acetylamido-N-butyl-methyl isothiurea
hydrochloride, 153*.

N-Phenyl-N'-dodecyl thiourea, 154.
Phenyl ethyl thiourea, 153.
N-Phenyl thiourea, 278.

S-Stearamidomethyl-N-dodecoxymethyl-isothiurea hydrochloride, 153*.
Stearamidomethyl isothiurea hydrochloride, 153*.
Stearamidomethyl thiouronium chloride, 3.
Stearyl thiourea, 195, 317.

Thiourea, 16, 21, 56, 83, 87, 139, 152, 153, 155, 157, 248, 250,
277, 278, 283, 284, 286, 291, 292, 293, 294, 295.
Triethyl thiourea, 152, 153, 277, 278.

XXVII. UREA DERIVATIVES

C. Guanyl Derivatives

Biguanidine, 139.

Guanidine, 139.
Guanyl urea, 139.
Guanyl urea benzoate, 303.
Guanyl urea 2-ethyl-hexanoate, 303.
Guanyl urea naphthenate, 303.
Guanyl urea 2-phenyl cinchoninate, 303.
Guanyl urea phthalate, 303.
Guanyl urea stearate, 303.

XXVIII. WAXES AND FATS

Blubber, 293.
n-Butyl methacrylate ester gum, 57.

Carnuba wax, 91.

Dihydronaphthalene resin, 57, 305.

Japan wax, 91.

Methyl methacrylate hydrogenated ester gum, 57.

XXIX. MISCELLANEOUS

1,2-Benzisoxazine, 261.
Benzoyl peroxide, 57.

Carbon disulfide, 122.
Cholesterol, 94, 176, 311.

Diheptadecyl- β -naphthylamine anil, 331*.
N,N'-Dithiocarbonyl benzidine, 266.

Glucose, 309, 326, 329.
Glyoxal di-octadecyl semi acetal, 23*.

Hydrogen peroxide, 48.

Starch, 89, 91, 164.
Stearylcarbylamine, 74*.
Stearyl- β -chlorethyl carbamide, 159.

LITERATURE CITED

- (1) AELONY, DAVID.
1946. TREATMENT OF TEXTILES. U. S. Patent 2,398,272.
- (2) AMERICAN CYANAMID COMPANY
1947. RESIN FINISHING OF TEXTILES. British Patent 586,997.
- (3) BACON, OSBORNE COSTER.
1943. TREATMENT OF TEXTILE FIBER. U.S. Patent 2,327,160.
- (4) BALDWIN, ALFRED WILLIAM, EVANS, JOHN GWYNANT, and SALKELD, CHARLES EDWARD.
1938. TREATMENT OF CELLULOSIC TEXTILE MATERIALS, PAPER, FILMS AND THE LIKE. British Patent 477,991.
- (5) _____ EVANS, JOHN GWYNANT, and SALKELD, CHARLES EDWARD.
1942. TREATMENT OF CELLULOSIC MATERIAL. U.S. Patent 2,278,417.
- (6) _____ EVANS, JOHN GWYNANT, and SALKELD, CHARLES EDWARD.
1942. TREATMENT OF CELLULOSIC MATERIAL. U.S. Patent 2,278,418.
- (7) _____ and PIGGOTT, HENRY ALFRED.
1937. MANUFACTURE OF NEW ALIPHATIC AND CYCLOALIPHATIC HALIDES. British Patent 471,130.
- (8) _____ and PIGGOTT, HENRY ALFRED.
1937. MANUFACTURE OF NEW DERIVATIVES OF ALIPHATIC ALCOHOLS. British Patent 475,119.
- (9) _____ and PIGGOTT, HENRY ALFRED.
1938. METHYLENE HALIDE DERIVATIVES OF CARBOXYLIC ACID AMIDES, AND CARBAMIC ESTERS, RESPECTIVELY, AND PROCESS OF MAKING THE SAME. U.S. Patent 2,131,362.
- (10) _____ and PIGGOTT, HENRY ALFRED.
1942. QUATERNARY AMMONIUM COMPOUND, AND PROCESS OF MAKING THE SAME. U.S. Patent 2,303,191.
- (11) _____ REYNOLDS, REGINALD JOHN WILLIAM, WALKER, ERIC EVERARD and WOOLVIN, CLARENCE SYDNEY.
1937. IMPROVEMENTS IN THE TREATMENT OF CELLULOSIC MATERIAL. British Patent 469,476.
- (12) _____ and ROGERS, MAURICE ARTHUR THOROLD.
1940. ORGANIC NITROGEN COMPOUNDS. British Patent 517,632.
- (13) _____ and ROGERS, MAURICE ARTHUR THOROLD.
1943. NEW WATER-REPELLENT AGENT AND PROCESS OF MAKING SAME. U.S. Patent 2,327,162.

- (14) BALDWIN, ALFRED WILLIAM and WALKER, ERIC EVERARD.
1937. MANUFACTURE OF NEW DERIVATIVES OF ALIPHATIC ACID AMIDES. British Patent 475,170.
- (15) _____ and WALKER, ERIC EVERARD.
1939. QUATERNARY AMMONIUM SALTS. U.S. Patent 2,146,392.
- (16) BALLE, GERHARD, ROSENBACK, JOHANN and ORTHNER, LUDWIG.
1942. WATER-REPELLENT TEXTILE MATERIAL AND A PROCESS OF PREPARING IT. U.S. Patent 2,301,676.
- (17) _____ ROSENBACK, JOHANN, and ORTHNER, LUDWIG.
1947. QUATERNARY AMMONIUM SALTS AND PROCESS OF PREPARING THEM. U.S. Patent 2,426,293.
- (18) BARNES, R.S., HARRIS, J.E.G., and THOMAS, J.
1928. SULPHURIC ANHYDRIDE COMPOUNDS OF PYRIDINE, QUINOLINE, ETC. British Patent 317,736.
- (19) BARRY, ARTHUR T.
1946. ORGANO-SILICON ESTERS AND MATERIALS TREATED THEREWITH. U.S. Patent 2,405,988.
- (20) BATTYE, ALBERT EDWARD, CANDLIN, ERNEST JOHN, TANKARD, JOSEPH, CORTEEN, HARRY, and WOOD, FREDERICK CHARLES.
1939. IMPROVEMENTS RELATING TO FINISHING PROCESSES FOR TEXTILE MATERIALS. British Patent 506,721.
- (21) _____ CANDLIN, ERNEST JOHN, TANKARD, JOSEPH, CORTEEN, HARRY, and WOOD, FREDERICK CHARLES.
1940. IMPROVEMENTS RELATING TO FINISHING PROCESSES FOR TEXTILE MATERIALS. British Patent 517,011.
- (22) BAXTER, S. and CASSIE, A.B.D.
1945. THE WATER REPELLENCY OF FABRICS AND A NEW WATER REPELLING TEST. J. Textile Inst. 36: T67-T90.
- (23) BECK, HANS.
1941. PROCESS FOR PRODUCING WATER-REPELLENT TEXTILE MATERIALS AND PRODUCTS THEREFROM. U. S. Patent 2,242,051.
- (24) _____
1942. WATER-REPELLENT TEXTILE PRODUCT. Canadian Patent 409,663.
- (25) _____
1942. DIALDEHYDE COMPOUND AND PROCESS FOR MAKING THE SAME. U.S. Patent 2,297,864.
- (26) BERTSCH, HEINRICH.
1942. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON FASERSTOFFEN. German Patent 724,720.

- (27) BESTIAN, HERBERT and VON FINCK, GEORG.
1943. BEHANDLUNG VON FASERSTOFFEN. German Patent 731,667.
- (28) _____ and VON FINCK, GEORG.
1943. PROCESS OF IMPREGNATING TEXTILE MATERIALS AND THE MATERIAL THUS OBTAINED. U.S. Patent 2,314,968.
- (29) BOCK, LOUIS H.
1940. ALIPHATIC DIOXYMETHYLENE QUATERNARY AMMONIUM HALIDES AND PROCESS FOR PRODUCING THEM. U.S. Patent 2,204,653.
- (30) _____
1940. PROCESS OF WATER-PROOFING FABRICS. U.S. Patent 2,209,383.
- (31) _____
1942. DIMETHYLENE QUATERNARY AMMONIUM SALTS. U.S. Patent 2,282,702.
- (32) _____
1942. PREPARATION OF AMINOMETHYL ETHERS. U.S. Patent 2,287,464.
- (33) _____
1942. ALPHYLOXYMETHYL AMINES, U.S. Patent 2,295,709.
- (34) _____ and BRUSON, HERMAN A.
1942. PROCESS OF WATERPROOFING. U.S. Patent 2,282,701.
- (35) _____ and HOUK, ALVA L.
1942. ALDEHYDO QUATERNARY AMMONIUM COMPOUNDS. U.S. Patent 2,276,149.
- (36) BÖHME, H.TH. A-G.
1934. PROCÉDÉ POUR L'OBTENTION D'UN AVIVAGE RÉSISTANT À L'EAU SUR DES MATIÈRES FIBREUSES. French Patent 770,235.
- (37) _____
1935. A PROCESS FOR THE PRODUCTION OF A WATER-RESISTING FINISH ON FIBROUS MATERIALS. British Patent 425,431.
- (38) BONNET, L.
1940. SUR LES APPRÊTS CHIMIQUES DES TISSUS DE COTON ET AUTRES FIBRES CELLULOSIQUES. L'Industrie Textile 57: 219-220, 254-256.
- (39) BRITISH THOMSON-HOUSTON COMPANY LTD.
1945. IMPROVEMENTS IN AND RELATING TO METHODS OF TREATING MATERIALS AND ARTICLES TO RENDER THEM WATER-REPELLENT. British Patent 572,740.
- (40) _____
1946. APPLICATION OF ORGANIC SILICON HALIDE VAPOUR IN WATER-REPELLENT TREATMENTS. British Patent 575,675.

- (41) BRITISH THOMSON-HOUSTON COMPANY LTD.
1946. APPLICATION OF ORGANIC SILICON HALIDE VAPOUR IN WATER-REPELLENT TREATMENTS. British Patent 575,696.
- (42) BRUNNER, ARNOLD.
1939. CHLORO-METHYL ALKYL PHENOLS. U.S. Patent 2,165,956.
- (43) _____
1939. CONDENSATION PRODUCTS AND A PROCESS OF PREPARING THEM.
U.S. Patent 2,180,791.
- (44) _____ and VON FINCK, GEORG.
1941. PROCESS OF IMPREGNATING FIBROUS MATERIAL AND THE MATERIAL THUS OBTAINED. U.S. Patent 2,234,363.
- (45) _____ and VON FINCK, GEORG.
1942. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON TEXTILIEN
German Patent 727,400.
- (46) BRUSON, HERMAN ALEXANDER.
1934. EMULSIFYING DETERGENT AND WETTING AGENT. U.S. Patent 1,952,008.
- (47) _____ and BOCK, LOUIS H.
1941. WATER-REPELLENT PROCESS. U.S. Patent 2,257,088.
- (48) _____ and MC CLEARY, RUSH F.
1940. OXIDES OF PHENOLIC AMINES. U.S. Patent 2,220,835.
- (49) _____ and MACMULLEN, CLINTON W.
1940. PHENOLIC TRIAMINES. U.S. Patent 2,220,834.
- (50) BURNAND, MARCEL.
1939. NOUVEAUX PROCÉDÉS DANS LA TECHNIQUE DE L'IMPERMEABILISATION À L'EAU ET DE L'HYDROFUGATION DES TEXTILES. Teintex 4: 27-33, 97-104, 155-163.
- (51) CHEMISCHE FABRIK VORMALS SANDOZ.
1927, PROCESS FOR THE TREATMENT OF COTTON AND ARTIFICIAL SILK FIBERS. British Patent 284,358.
- (52) _____
1927. PROCESS FOR THE TREATMENT OF COTTON AND ARTIFICIAL SILK FIBERS. (German Patent 448,792) Celluloseverbindungen, Faust, O. pg 2777. (Berlin 3098 pps.)
- (53) _____
1928. ERHÖHUNG DER FARBSTOFFAUFNAHMEFÄHIGKEIT TIERISCHER FASERN. German Patent 462,090.
- (54) _____
1939. PROCÉDÉ DE TRAITEMENT DE FIBRES TEXTILES ET PRÉPARATIONS UTILISABLES POUR LA MISE EN OEUVRE DE CE PROCÉDÉ.
French Patent 850,327.

- (55) CHWALA, A.
1938. ÜBER HYDROPHOBIERUNG VON FASERSTOFFEN. Melliand Textilber. 19:905-910.
- (56) COFFMAN, DONALD DRAKE and SAUER, JOHN CARL.
1944. DISULPHONAMIDES HAVING QUATERNARY AMMONIUM SALT GROUPS. U.S. Patent 2,362,886.
- (57) COLLINS, LUCIUS, SLOWINSKE, GEORGE ANTON and SMITH, JOSEPH EDWARD.
1944. TREATMENT OF TEXTILE FIBER WITH WATER REPELLENCY AGENTS. U.S. Patent 2,361,270.
- (58) CORTEEN, HARRY and WOOD, FREDERICK CHARLES.
1939. IMPROVEMENTS IN AND RELATING TO TEXTILE FINISHING PROCESSES. British Patent 506,783.
- (59) CRAVENETTE COMPANY.
1947. MAKING TEXTILES WATER-REPELLENT. British Patent 589,649.
- (60) CROEN, ERIC.
1943. WATER REPELLENT AND WATERPROOF FINISHES FOR TEXTILES. Cotton (Atlanta) 107(1):63-66.
- (61) CUSA, NOEL WILLIAM, SALKELD, CHARLES EDWARD and WALKER, ERIC EVERARD.
1938. NEW NITROGENOUS ORGANIC COMPOUNDS AND THEIR APPLICATIONS. British Patent 497,856.
- (62) _____ SALKELD, CHARLES EDWARD and WALKER, ERIC EVERARD.
1938. NITROGENOUS ORGANIC COMPOUNDS AND THEIR APPLICATION. British Patent 498,287.
- (63) DAVIS, F.V.
1947. SOME CHEMICAL ASPECTS OF THE APPLICATION OF VELAN PF TO COTTON FABRICS. Soc. Dyers and Colourists 63: 260-263.
- (64) DEUTSCHE HYDRIERWERKE A.-G.
1933. IMPROVEMENTS IN OR RELATING TO THE MANUFACTURE OF NEW PRODUCTS SUITABLE FOR USE AS WASHING, WETTING-OUT, EMULSIFYING, DISPERSING, PEPTIZING, FOAMING, CLEANSING AND LIKE AGENTS. British Patent 394,196.
- (65) _____
1933. WETTING AGENTS ETC. French Patent 743,594.
- (66) _____
1934. DYEING CELLULOSE FIBERS. French Patent 761,650.

- (67) DEUTSCHE HYDRIERWERKE A-G.
1935. IMPROVEMENTS IN OR RELATING TO THE TREATMENT OF CELLULOSE FIBRE PARTICULARLY FOR IMPROVING THE DYING PROPERTIES THEREOF. British Patent 426,482.
- (68) _____
1939. IMPROVEMENTS IN OR RELATING TO THE TREATMENT OF FIBROUS TEXTILE MATERIALS. British Patent 515,908.
- (69) _____
1940. PROCESS FOR RENDERING TEXTILES, PAPER, LEATHER, FURS, AND THE LIKE WATER REPELLENT. British Patent 522,204.
- (70) DEUTSCHE KUNSTSEIDEN-STUDIENGESELLSCHAFT M.B.H. IN BERLIN.
1935. VERFAHREN ZUR VEREDELUNG GEREINIGTEN TEXTILSTOFFE. German Patent 616,722.
- (71) _____
1935. VERFAHREN ZUM VEREDELN VON TEXTILIEN MIT HILFE VON VERESTERNDEN ABKÜMMLINGEN HÖHERER FETTSÄUREN. German Patent 619,228.
- (72) _____
1935. VERFAHREN ZUR VEREDELUNG GEREINIGTEN TEXTILSTOFFE German Patent 623,542.
- (73) DREYFUS, HENRY.
1939. PERFECTIONNEMENTS À LA FABRICATION DES MATIÈRES TEXTILES ET D'AUTRES MATIÈRES. French Patent 845,300.
- (74) _____
1944. CHEMICAL TREATMENT OF CELLULOSE TEXTILES. British Patent 559,584.
- (75) DUNBAR, C., LANDELLS, G., NORRIS, C. A., SMITH, R. J. and IMPERIAL CHEMICAL INDUSTRIES LTD.
1946. WATER-REPELLENT EFFECTS ON NYLON. British Patent 577,433.
- (76) DUPONT, E. I. DE NEMOURS AND COMPANY
1941. MANUFACTURE OF TEXTILE TREATING AGENTS. British Patent 536,619.
- (77) _____
1941. NEW WATER-REPELLENT AGENTS. British Patent 537,297.
- (78) _____
1944. ORGANIC THIOCYANATES AND ISOTHIOCYANATES. British Patent 565,780.
- (79) _____
1944. QUATERNARY AMMONIUM THIOCYANATES. British Patent 566,380.

- (80) ECKELMANN, ALFRED, and KOCH, ERNST.
1937. WATER SOLUBLE SALTS OF BASIC PRODUCTS, VIZ., OF
IMIDOETHERS, IMIDOTHIOETHERS, AMIDINES, OR DERIVATIVES
THEREOF. U.S. Patent 2,091,257.
- (81) ENGELMANN, MAX and PIKL, JOSEF.
1942. ORGANIC COMPOUND AND PROCESS OF PREPARING THE SAME.
U.S. Patent 2,304,156.
- (82) _____ and PIKL, JOSEF.
1942. PROCESS FOR IMPROVING TEXTILES. U.S. Patent
2,304,157.
- (83) _____ and PIKL, JOSEF.
1943. ORGANIC COMPOUND AND PROCESS FOR MAKING SAME.
U.S. Patent 2,313,741.
- (84) _____ and PIKL, JOSEF.
1943. PROCESS OF TREATING TEXTILE FIBER. U.S. Patent
2,313,742.
- (85) _____ and PIKL, JOSEF.
1944. PROCESS OF MAKING ETHER COMPOUNDS. U.S. Patent
2,361,185.
- (86) ERICKS, WALTER P., and MCCLELLAN, PAUL P.
1943. MONOSUBSTITUTED CYANAMIDE AND A METHOD OF PREPARING
THE SAME. U.S. Patent 2,331,670.
- (87) EVANS, JOHN GWYNANT.
1939. PROCESS OF TREATING CELLULOSIC TEXTILE MATERIALS.
British Patent 501,288.
- (88) EVANS, JOHN GWYNANT, PIGGOTT, HENRY ALFRED, SALKELD, CHARLES
EDWARD, REYNOLDS, REGINALD JOHN WILLIAM, WALKER, ERIC
EVERARD and WOOLVIN, CLARENCE SYDNEY.
1938. IMPROVEMENTS IN THE TREATMENT OF CELLULOSIC MATERIALS.
British Patent 495,025.
- (89) EVANS, JOHN GWYNANT and SALKELD, CHARLES EDWARD.
1937. IMPROVEMENTS IN FINISHING TEXTILES. British Patent
472,389.
- (90) _____ and SALKELD, CHARLES EDWARD.
1938. RENDERING WOOL AND SILK WATER-REPELLENT. British
Patent 493,920.
- (91) _____ and SALKELD, CHARLES EDWARD.
1938. FINISHING TEXTILE MATERIALS. U.S. Patent 2,125,901.
- (92) _____ and SALKELD, CHARLES EDWARD.
1941. TREATMENT OF WOOL AND SILK. U.S. Patent 2,250,930.

- (93) ^HFÄRBEREI A-G.,
1936. PROCÉDÉ POUR HYDROFUGER LES TEXTILES. French Patent
805,591.
- (94) -----
1937. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON TEXTILIEN.
Austrian Patent 150,292.
- (95) -----
1937. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT AND
PRODUCTS THEREFROM. British Patent 474,403.
- (96) -----
1937. PROCESSES FOR PRODUCING WATER-REPELLENT TEXTILE
MATERIALS AND PRODUCTS THEREFROM. British Patent 477,029.
- (97) -----
1937. PROCÉDÉ POUR APPRÊTER LES PRODUITS TEXTILES, NOTAMMENT
POUR LES RENDRE REPULSIFS À L'EAU, ET POUR DIMINUER LA
GONFLABILITE DE LA RAYONNE. French Patent 819,945.
- (98) -----
1938. PROCESS FOR THE PRODUCTION OF HIGH MOLECULAR
QUATERNARY AMMONIUM COMPOUNDS. British Patent 492,699.
- (99) -----
1938. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT.
British Patent 493,067.
- (100) -----
1938. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT.
British Patent 494,761.
- (101) -----
1938. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT.
British Patent 494,833.
- (102) -----
1938. PROCÉDÉ DE PRÉPARATION DE COMPOSÉS QUATERNAIRES
D'AMMONIUM, ET LEUR UTILISATION POUR TRANSFORMER LES
TEXTILES DE FAÇON QU'ILS NE SOIENT PAS MOUILLES PAR
L'EAU. French Patent 834,949.
- (103) -----
1939. PROCESS FOR DYING CELLULOSE AND CELLULOSE DERIVATIVE-
FIBROUS MATERIAL WITH ACID DYESTUFFS. British Patent
501,913.
- (104) -----
1940. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON TEXTILIEN.
German Patent 687,907.
- (105) -----
1940. VERFAHREN ZUM VEREDELN VON CELLULOSE- UND
CELLULOSEDERIVATFASERGUT. German Patent 688,119.

- (106) FARBEREI GESELLSCHAFT FLORES & COMPANY.
1939. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON TEXTILIEN.
German Patent 681,817.
- (107) _____
1942. VERFAHREN ZUM VEREDLN, INSBESINDERE WASSERABSTOSSEND-
MACHEN VON TEXTILIEN. German Patent 727,319.
- (108) FLORES, MAX and ESSERS, WILHELM.
1938. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT AND
PRODUCTS THEREFROM. British Patent 487,645.
- (109) _____
1939. PROCESS FOR THE PRODUCTION OF QUATERNARY AMMONIUM
COMPOUNDS. British Patent 501,480.
- (110) _____
1939. PROCESS FOR THE PRODUCTION OF QUATERNARY AMMONIUM
COMPOUNDS. British Patent 507,687.
- (111) GAULT, H., and EHRMANN, P.
1923. LES ETHERS-SELS CELLULOSIQUES SOLUBLES DES ACIDES
GRAS SUPERIEURS. Compt. Rend. 177: 124-127.
- (112) GEIGY, J.R., A-G.
1934. MANUFACTURE OF QUATERNARY AMMONIUM COMPOUNDS, AND
THE TREATMENT OF TEXTILES THEREWITH. British Patent
553,681.
- (113) GÖTTE, ERNST.
1936. METHOD OF PRODUCING A WATERPROOF SCROOP ON FIBER
MATERIALS. U.S. Patent 2,051,843.
- (114) GRÜN, A. and WITTKA, F.
1921. PREPARATION AND INTERCHANGE OF ESTER RADICALS OF THE
CELLULOSE ESTERS; CELLULOSE STEARATE AND LAURATE.
Z. Angew Chem. 34:645-648.
- (115) GUENTHER, FRITZ, HAUSSMANN, HANS and ALT, WOLFGANG.
1939. PRODUCTION OF CONVERSION PRODUCTS FROM CELLULOSE
OR CELLULOSIC MATERIALS. U.S. Patent 2,150,968.
- (116) HANFORD, WILLIAM E. and HOLMES, DONALD F.
1942. TREATMENT OF TEXTILES TO IMPART WATER-REPELLENCE.
U.S. Patent 2,284,895.
- (117) HARTSFIELD, ERNEST PAUL and RICHMOND, JOSEPH LESTER.
1947. FABRIC TREATING PASTE. U.S. Patent 2,419,399.
- (118) HAUSSMANN, HANS, MEISSNER, OSWALD and ZINKE, HELMUT.
1940. PROCESS FOR THE REFINING OF TEXTILES. U.S. Patent
2,225,589.

- (119) HEBERLEIN & COMPANY A-G.
1928. PROCESS FOR PRODUCING NEW EFFECTS ON VEGETABLE
YARNS AND FABRICS. British Patent 313,616.
- (120) HENKE, CLYDE O. and PIKL, JOSEF.
1941. QUATERNARY AMMONIUM COMPOUNDS. U.S. Patent
2,268,395.
- (121) HENTRICH, WINFRID, and HUETER, RICHARD.
1946. PROCESS FOR RENDERING TEXTILES, FIBERS, AND THE
LIKE WATER-REPELLENT. U.S. Patent 2,411,860.
- (122) _____ HUETER, RICHARD and ENGELBRECHT, HEINZ-JOACHIM.
1941. METHOD FOR IMPROVING TEXTILE MATERIAL. U.S. Patent
2,263,730.
- (123) HOOVER, FRED WAYNE and VAALA, GORDON THEODORE.
1945. ETHYLENE UREA DERIVATIVES. U.S. Patent 2,373,136.
- (124) HUBERT, EMIL and HEISENBERG, ERWIN.
1942. VERFAHREN ZUM HYDROPHOBIEREN VON CELLULOSE- ODER
CELLULOSEHYDRATTEXTILGUT. German Patent 718,566.
- (125) HEISENBERG, ERWIN, STEINDORFF, ADOLPH and ORTHNER, LUDWIG.
1939. PROCESS OF IMPARTING HYDROPHOBIC PROPERTIES TO
CELLULOSE FIBERS. U.S. Patent 2,165,265.
- (126) HUNTER, MELVIN J., FLETCHER, HERBERT J. and CURRIE, CHESTER C.
1947. ALKOXY END-BLOCKED SILOXANES AND METHOD OF MAKING
SAME. U.S. Patent 2,415,389.
- (127) I.G. FARBENINDUSTRIE A-G.
1934. PROCEDE POUR LA FABRICATION D'APPRÊTS RÉSISTANT AU
LAVAGE. French Patent 766,119.
- (128) _____
1936. DICARBOXYLIC ACIDS. British Patent 441,016.
- (129) _____
1936. IMPROVEMENTS IN THE MANUFACTURE AND PRODUCTION OF
AQUEOUS DISPERSIONS OF ANHYDRIDES OF FATTY ACIDS OF
HIGH MOLECULAR WEIGHT. British Patent 451,300.
- (130) _____
1936. CONDENSATION PRODUCTS. French Patent 801,919.
- (131) _____
1936. MATIÈRES FIBREUSES NATURELLES OU ARTIFICIELLES
REPOUSSANT L'EAU ET PROCEDE DE PREPARATION DE CES
MATIÈRES. French Patent 806,155.
- (132) _____
1936. PROCEDE POUR HYDROFUGER LES TEXTILES. French
Patent 806,944.

- (133) I.G. FARBENINDUSTRIE A-G.
1937. VERFAHREN ZUM BEHANDELN VON FASERSTOFFEN. Austrian
Patent 149,654.
- (134) _____
1937. A PROCESS FOR WATERPROOFING FIBROUS MATERIALS.
British Patent 460,602.
- (135) _____
1937. IMPROVING NATURAL OR ARTIFICIAL FIBROUS MATERIAL.
British Patent 461,179.
- (136) _____
1937. IMPROVEMENTS IN RENDERING TEXTILES WATER-REPELLENT.
British Patent 461,670.
- (137) _____
1937. PROCESS OF IMPARTING HYDROPHOBIC PROPERTIES TO
CELLULOSE FIBERS. British Patent 463,300.
- (138) _____
1937. PROCESS OF IMPARTING HYDROPHOBIC PROPERTIES TO
CELLULOSE FIBERS. British Patent 463,472.
- (139) _____
1937. PROCESS OF IMPARTING HYDROPHOBIC PROPERTIES TO
CELLULOSE FIBERS. British Patent 467,166.
- (140) _____
1937. IMPROVING TEXTILE FIBERS. British Patent 467,992.
- (141) _____
1937. PROCÉDÉ POUR AMÉLIORER LES MATIÈRES TEXTILES. French
Patent 809,404.
- (142) _____
1937. MATIÈRES CELLULOSIQUES AMÉLIORÉES ET PROCÉDÉ DE
PRÉPARATION DE CES MATIÈRES. French Patent 822,195.
- (143) _____
1937. MATIÈRES TEXTILES AMÉLIORÉES ET PROCÉDÉ DE PRÉPARATION
DE TELLES MATIÈRES. French Patent 822,196.
- (144) _____
1938. MANUFACTURE OF PHENOLIC COMPOUNDS CONTAINING A
CHLOROMETHYL GROUP AND NITROGEN-CONTAINING CONDENSATION
PRODUCTS THEREFROM. British Patent 478,571.
- (145) _____
1938. PROCESS FOR IMPROVING TEXTILES. British Patent
479,753.
- (146) _____
1938. IMPROVEMENTS IN WATER-PROOFING TEXTILE MATERIALS.
British Patent 489,495.

- (147) I.G. FARBENINDUSTRIE A-G.
1938. IMPROVING NATURAL OR ARTIFICIAL FIBROUS MATERIAL.
British Patent 495,645.
- (148) _____
1938. IMPROVEMENTS IN TREATING TEXTILE MATERIALS. British
Patent 495,714.
- (149) _____
1938. IMPROVED CELLULOSE MATERIAL AND A PROCESS OF
PREPARING IT. British Patent 496,130.
- (150) _____
1938, MATIÈRES FIBREUSES REPOUSSANT L'EAU ET PROCÉDÉ DE
PRÉPARATION DE CES MATIÈRES. French Patent 832,029.
- (151) _____
1939. A PROCESS FOR WATERPROOFING FIBROUS MATERIALS.
British Patent 498,402.
- (152) _____
1939. WETTING AGENTS ETC. British Patent 507,207.
- (153) _____
1939. PROCESS FOR RENDERING ANIMAL OR VEGETABLE FIBROUS
MATERIALS WATER-REPELLENT. British Patent 507,628.
- (154) _____
1939. MANUFACTURE OF AGENTS OF CAPILLARY ACTION. British
Patent 508,066.
- (155) _____
1939. THIOURONIUM SALTS. British Patent 511,144.
- (156) _____
1939. MATIÈRES FIBREUSES INFROISSABLES ET REPOUSSANT
L'EAU ET PROCÉDÉ DE PRÉPARATION DE CES MATIÈRES.
French Patent 836,872.
- (157) _____
1939. MATIÈRES TEXTILES HYDROFUGES ET PROCÉDÉ DE PRÉPARATION
DE CES MATIÈRES. French Patent 847,824.
- (158) _____
1939. PROCÉDÉ POUR HYDROFUGER DES MATIÈRES FIBREUSES.
French Patent 850,811.
- (159) _____
1939. PROCÉDÉ POUR HYDROFUGER DES MATIÈRES TEXTILES.
French Patent 850,862.
- (160) _____
1940. PROCÉDÉ POUR L'APPRÊTAGE HYDROPHOBE DE TEXTILES
D'ORIGINE VÉGÉTALE. French Patent 851,350.

- (161) I.G. FARBENINDUSTRIE A-G.
1940. PROCÉDÉ POUR L'APPRÊTAGE HYDROPHOBE DE TEXTILES
D'ORIGINE VÉGÉTALE. French Patent 851,904.
- (162) _____
1940. PROCÉDÉ POUR RENDRE LES MATIÈRES FIBREUSES
IMPERMEABLES À L'EAU. French Patent 852,372.
- (163) _____
1940. FIBRES HYDROFUGES ET LEUR PROCÉDÉ DE PRÉPARATION
French Patent 852,552.
- (164) _____
1940. VERFAHREN ZUR ERZEUGUNG WASCHBESTÄNDIGER APPRETUREN.
German Patent 696,807.
- (165) _____
1941. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON TEXTILWAREN.
German Patent 704,540.
- (166) _____
1941. VERFAHREN ZUM HYDROPHOBIEREN VON CELLULOSE- ODER
CELLULOSEHYDRATTEXTILGUT. German Patent 711,292.
- (167) IMPERIAL CHEMICAL INDUSTRIES LTD.
1937. PROCÉDÉ POUR CONSTITUER UN APPRÊT PERMANENT À BASE
D'AMIDON SUR DES MATIÈRES. French Patent 816,387.
- (168) _____
1937. ORGANIC NITROGEN COMPOUNDS. French Patent 818,438.
- (169) _____
1937. QUATERNARY AMMONIUM SALTS. French Patent 821,856.
- (170) _____
1937. QUATERNARY AMMONIUM SALTS. French Patent 821,857.
- (171) _____
1938. PROCÉDÉ DE TRAITEMENT DES MATIÈRES CELLULOSIQUES.
French Patent 822,787.
- (172) _____
1939. PERFECTIONNEMENTS AU TRAITEMENT DES MATIÈRES
CELLULOSIQUES. French Patent 836,069.
- (173) JACKSON, J.R.F.
1945. WATERPROOFING AND WATER-REPELLENT FINISHING OF
TEXTILES. Textile Recorder 62(742):60-61.
- (174) JACOBSON, RALPH A.
1937. PROCESS FOR THE PREPARATION OF UREA DERIVATIVES.
U.S. Patent 2,090,593.

- (175) KAASE, WALTHER and WALTMANN, ERNST.
1939. PROCESS FOR RENDERING TEXTILES WATER REPELLENT.
U.S. Patent 2,171,791.
- (176) _____ and WALTMANN, ERNST.
1940. PROCESS FOR PRODUCING WATER-REPELLENT CELLULOSE-
CONTAINING MATERIALS AND PRODUCTS THEREFROM. U.S. Patent
2,207,740.
- (177) _____ and WALTMANN, ERNST.
1942. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT AND
PRODUCTS THEREFROM. U.S. Patent 2,303,363.
- (178) _____ and WALTMANN, ERNST.
1944. ISOCYANATES AND RELATED SUBSTANCES AND PROCESS FOR
THEIR MANUFACTURE. U.S. Patent 2,340,757.
- (179) _____ and WALTMANN, ERNST.
1946. TEXTILE MATERIAL WATER REPELLING PROCESS. Canadian
Patent 433,930.
- (180) _____ and WALTMANN, ERNST.
1946. TEXTILE MATERIAL WATER REPELLING PROCESS. Canadian
Patent 433,931.
- (181) KARRER, PAUL.
1925. PREPARATION OF COTTON TEXTILES WHICH CAN BE DYED
DIRECTLY WITH ACID DYESTUFFS. British Patent 249,842.
- (182) _____
1926. VERFAHREN ZUR DARSTELLUNG VON BAUMWOLLFASERN, DIE
SICH DIREKT DURCH SAURE FARBSTOFFE ANFARBEN LASSEN.
German Patent 438,324.
- (183) _____
1927. IMPROVEMENTS IN OR RELATING TO THE TREATMENT OF
COTTON AND VISCOSE SILK FIBRES PREPARATORY TO DYEING.
British Patent 263,169.
- (184) _____
1933. PROCESS FOR TREATING CELLULOSE AND PRODUCTS
THEREFROM. U.S. Patent 1,897,026.
- (185) KITA, G. SAKURADA, I. and NAKASHIMA.
1926. CELLULOSE ESTERS. Cellulose Ind. (Tokyo) 2:30-32.
- (186) KORESKA COMPANY, WILHELM.
1934. VERFAHREN ZUR VEREDELUNG VON AUS ZELLULOSE
HERGESTELLTEN ODER DIESE ENTHALTENDEN, ZUSAMMENHÄNGENDEN
TEXTILIEN. Austrian Patent 137,650.
- (187) KURSANOV, D.N., and SELKINA, V.N.
1943. PREPARATION AND PROPERTIES OF CHLOROMETHYL ETHERS OF
THE ALIPHATIC SERIES. J. Applied Chem. U.S.S.R. 16:36-46.
(in Russian with English summary)

- (188) LANT, RICHARD.
1931. PERFECTIONNEMENTS AUX FILAMENTS ET TISSUS TEXTILES
FORMES DE MATIERE CELLULOSIQUE. French Patent 707,688.
- (189) _____
1932. IMPROVEMENTS IN AND RELATING TO THE TREATMENT OF
TEXTILE FILAMENTS AND FABRICS AND OTHER MANUFACTURED
COHERENT STRUCTURES FORMED FROM OR CONTAINING CELLULOSIC
MATERIAL. British Patent 376,295.
- (190) _____
1936. WOVEN OR KNITTED FABRIC MAINLY CONSISTING OF
CELLULOSIC FIBERS AND METHOD OF MANUFACTURING SAME.
U.S. Patent 2,032,992.
- (191) _____ and KORESKA, WILHELM.
1929. MODIFICATION OF TEXTILE MATERIALS BY ESTERIFICATION
WITH HIGHER FATTY ACID CHLORIDES IN THE PRESENCE OF
PYRIDINE. British Patent 343,104.
- (192) LINNHOFF, WOLFGANG.
1942. TREATMENT OF TEXTILE MATERIALS. U.S. Patent
2,270,658.
- (193) LITTLE, ROBERT W.
1947. FIAMEPROOFING TEXTILE FABRICS. ACS MONOGRAPH #104.
Reinhold Publishing Company, New York, New York.
- (194) LOMMEL, WILHELM and MÜNZEL, HEINRICH
1942. VERFAHREN ZUR VEREDELUNG VON TEXTILIEN. German
Patent 722,481.
- (195) MACKENZIE, CHARLES A.
1947. TEXTILE TREATING COMPOUNDS CONTAINING SILICON AND
THE PROCESS OF MAKING SAME. U.S. Patent 2,415,017.
- (196) MAXWELL, ROBERT WILLIAM.
1941. MANUFACTURE OF TEXTILE TREATING AGENTS. British
Patent 538,608.
- (197) _____
1941. CHEMICAL COMPOUND. U.S. Patent 2,259,650.
- (198) _____
1942. PROCESS OF TREATING TEXTILE FIBER. U.S. Patent
2,293,844.
- (199) _____
1944. TEXTILE TREATMENT PROCESS. U.S. Patent 2,343,920.
- (200) _____
1944. TEXTILE TREATMENT. U.S. Patent 2,358,871.

- (201) MOELLER, FRITZ.
1920. IMPROVED PROCESS FOR THE TREATMENT OF CELLULOSE AND PRODUCTS MANUFACTURED THEREFROM. British Patent 145,610.
- (202) _____
1921. IMPROVED PROCESS FOR THE TREATMENT OF CELLULOSE AND PRODUCTS MANUFACTURED THEREFROM. British Patent 145,611.
- (203) _____
1921. PROCESS OF TREATING CELLULOSE. (French Patent 517,953) Celluloseverbindungen, Faust O., pg 540.
- (204) _____
1922. VERFAHREN, UM NICHT ZUR VERWENDUNG IN DER TEXTILINDUSTRIE BESTIMMTE CELLULOSEÄHNLICHE STOFFE SCHWER BENETZBAR ZU MACHEN. Swiss Patent 94,856.
- (205) _____
1923. IMPROVEMENTS IN OR RELATING TO WATERPROOFING CELLULOSE OR CARBOHYDRATES OF THE CELLULOSE GROUP. British Patent 184,462.
- (206) _____
1923. TREATMENT OF CELLULOSE. Canadian Patent 229,826.
- (207) _____
1923. BEHANDELN VON CELLULOSE. Dutch Patent 8,487.
- (208) _____
1923. VERFAHREN ZUM SCHWERBENETZBAR-ODER WASSERDICHTMACHEN VON CELLULOSE, CELLULOSEHALTIGEN ROHSTOFFEN UND FABRIKATEN, CELLULOSEDERIVATEN UND ANDEREN KOHLEN-HYDRATEN DER CELLULOSEGRUPPE, SOWIE MIT SOLCHEN GETRANKTEN STOFFEN MITTELS THIONYLCHLORIDS ODER CHLORSCHWEFEL DÄMPFE. German Patent 370,198.
- (209) _____
1923. VERFAHREN ZUM SCHWERBENETZBAR- ODER WASSERDICHTMACHEN VON CELLULOSE, CELLULOSEHALTIGEN ROHSTOFFEN UND FABRIKATEN, CELLULOSEDERIVATEN UND FABRIKATEN, CELLULOSEDERIVATEN UND ANDEREN KOHLEN-HYDRATEN DER CELLULOSEGRUPPE, SOWIE MIT SOLCHEN GETRANKTEN STOFFEN MITTELS THIONYLCHLORIDS ODER CHLORSCHWEFEL DÄMPFE. Norwegian Patent 37,669.
- (210) _____
1923. IMPROVEMENTS IN OR RELATING TO WATERPROOFING CELLULOSE OR CARBOHYDRATES OF THE CELLULOSE GROUP. (Swedish Patent 58,826) Celluloseverbindungen, Faust, O. pg. 541.
- (211) _____
1923. PROCESS OF TREATING CELLULOSE. (Swiss Patent 95,613) Celluloseverbindungen, Faust, O. pg. 540.

- (212) MOELLER, FRITZ.
1923. IMPROVEMENTS IN OR RELATING TO WATERPROOFING
CELLULOSE OR CARBOHYDRATES OF THE CELLULOSE GROUP.
(Swiss Patent 109,292) Celluloseverbindungen, Faust, O.
pg. 541.
- (213) _____
1924. PROCESS OF TREATING CELLULOSE. (Austrian Patent
95,302) Celluloseverbindungen, Faust, O. pg. 540.
- (214) _____
1924. IMPROVEMENTS IN OR RELATING TO WATERPROOFING
CELLULOSE OR CARBOHYDRATES OF THE CELLULOSE GROUP.
(French Patent 554,395) Celluloseverbindungen, Faust, O.
pg. 541.
- (215) _____
1924. PROCESS OF TREATING CELLULOSE. (Norwegian Patent
35,298) Celluloseverbindungen, Faust, O. pg. 540.
- (216) _____
1924. PROCESS OF TREATING CELLULOSE. U.S. Patent 1,499,025.
- (217) MONCRIEFF, ROBERT WIGHTON and BATES, HAROLD.
1945. PRODUCTION OF TEXTILE AND OTHER ARTICLES. U.S. Patent
2,372,386.
- (218) MULLIN, C.E.
1931. AMINOCELLULOSE AND THE THEORY OF DYEING. Textile
Colorist 53:834-837.
- (219) _____
1938. VELAN AND SIMILAR WATER-REPELLENT FINISHES.
Textile Colorist 60:96-100, 163-166, 231-233.
- (220) _____
1940. WATER REPELLENT TEXTILES. Chem. Ind. 47(4):404-409.
- (221) NATHANSOHN, ALEXANDER.
1929. IMPROVED PROCESS FOR RENDERING TEXTILES WATER
REPELLENT. British Patent 355,256.
- (222) _____
1929. VERFAHREN, TEXTILIEN WASSERABSTOSSEND ZU MACHEN.
German Patent 521,029.
- (223) _____
1929. VERFAHREN ZUM WASSERFESTMACHEN VON ROHEN, CHEMISCH
NICHT GEREINIGTEN TEXTILFASERSTOFFEN. German Patent
542,186.
- (224) _____
1930. PROCÉDÉ DE FABRICATION DE TEXTILES HYDROFUGES.
French Patent 693,803.

- (225) NATHANSOHN, ALEXANDER.
1931. IMPROVEMENTS IN OR RELATING TO TEXTILES. British
Patent 356,878.
- (226) _____
1931. VERFAHREN ZUM APPRETIEREN VON TEXTILIEN. German
Patent 525,300.
- (227) _____
1931. VERFAHREN ZUR VEREDELUNG VON TEXTILIEN. German
Patent 554,874.
- (228) _____
1933. VERFAHREN ZUR VEREDELUNG GEREINIGTER TEXTILSTOFFE.
German Patent 572,613.
- (229) _____
1937. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT.
U.S. Patent 2,092,702.
- (230) _____
1938. PROCESS FOR THE TREATMENT OF TEXTILES. U.S. Patent
2,130,150.
- (231) NORRIS, C.A.
1939. WATER RESISTANT FINISHES. Textile Mercury and Argus
Jubilee No. 173-179.
- (232) NORTON, FRANCIS J.
1946. PRODUCTION OF WATER-REPELLENT MATERIALS. U.S. Patent
2,412,470.
- (233) NUSSLEIN, JOSEPH and VON FINCK, GEORG.
1941. PROCESS OF IMPREGNATING FIBROUS MATERIALS AND THE
MATERIAL THUS OBTAINED. U.S. Patent 2,234,501.
- (234) NUSSLEIN, JOSEF, VON FINCK, GEORG and STARK, HERMANN.
1939. TEXTILE MATERIAL AND A PROCESS OF PREPARING IT.
U.S. Patent 2,168,535.
- (235) ORTHNER, LUDWIG, BALLE, GERHARD, ROSENBAACH, JOHANN and
BONSTEDT, KURT.
1940. CONDENSATION PRODUCTS OF BETAIN-LIKE CONSTITUTION
AND A PROCESS OF PREPARING THEM. U.S. Patent 2,217,846.
- (236) _____
BALLE, GERHARD, ROSENBAACH, JOHANN and BONSTEDT, KURT.
1942. PROCESS OF WATERPROOFING TEXTILES. U.S. Patent
2,289,275.
- (237) OTT, EMIL.
1943. CELLULOSE AND CELLULOSE DERIVATIVES, 1176 pp.
New York, New York.

- (238) PASCALIS, GEORGES.
1939. OBTENTION D'APPRETS HYDROFUGES. Tiba 17:337-345.
- (239) PATNODE, WINTON I.
1942. METHOD OF RENDERING MATERIALS WATER REPELLENT. U.S.
Patent 2,306,222.
- (240) PETERS, H.
1938. HOW QUATERNARY COMPOUNDS HELP THE DYER. Rayon
Textile Monthly 19:167-168.
- (241) PIKL, JOSEF.
1942. ORGANIC COMPOUNDS AND PROCESS OF PREPARING THE SAME.
U.S. Patent 2,306,185.
- (242) _____
1943. ORGANIC THIOCYANATES AND ISOTHIOCYANATES AND PROCESS
OF PREPARING THE SAME. U.S. Patent 2,331,276.
- (243) PRINGSHEIM, H. LORAND, E. J. and WARD, K. Jr.
1932. HIGHER FATTY ACID ESTERS OF CELLULOSE. Celluloschem.
13:119-127.
- (244) REYNOLDS, REGINALD JOHN WILLIAM and WALKER, ERIC EVERARD.
1938. PROCESS FOR RENDERING CELLULOSIC MATERIAL WATER-
REPELLENT. British Patent 481,099.
- (245) REYNOLDS, REGINALD JOHN WILLIAM, WALKER, ERIC EVERARD and
WOOLVIN, CLARENCE SYDNEY.
1937. IMPROVEMENTS IN THE TREATMENT OF CELLULOSIC MATERIAL.
British Patent 466,817.
- (246) _____ WALKER, ERIC EVERARD and WOOLVIN, CLARENCE SYDNEY.
1941. CELLULOSIC MATERIAL. U.S. Patent 2,243,682.
- (247) ROBINETTE, HILLARY, JR.
1946. PREPARATION OF WATER-REPELLENT TEXTILES.
U.S. Patent 2,402,776.
- (248) ROGERS, MAURICE ARTHUR THOROLD.
1940. NEW NITROGEN-CONTAINING ORGANIC COMPOUNDS AND THEIR
APPLICATION TO TEXTILES. British Patent 517,474.
- (249) _____
1940. MANUFACTURE AND APPLICATION OF NEW WATER-REPELLENT
AGENTS. British Patent 517,631.
- (250) _____
1945. WATER-REPELLING AGENTS AND PROCESSES OF MAKING AND
USING THE SAME. U.S. Patent 2,386,140.
- (251) _____
1945. PROCESS OF TREATING TEXTILE MATERIALS. U.S. Patent
2,386,141.

- (252) ROGERS, MAURICE ARTHUR THOROLD.
1945. QUATERNARY AMMONIUM SALTS AND PROCESS OF MAKING THE SAME. U.S. Patent 2,386,142.
- (253) ROSENBACH, JOHANN and BALLE, GERHARD.
1942. ESTERLIKE CONDENSATION PRODUCTS AND A PROCESS OF PREPARING THFM. U.S. Patent 2,283,764.
- (254) ROWEN, J. W. and GAGLIARDI, D.
1947. PROPERTIES OF WATER-REPELLENT FABRICS. Research Paper RP1762 N.B.S. Vol. 38; Dyestuff Reporter 36:533-540.
- (255) RUST, JOHN B.
1941. WATER REPELLENT AND PROCESS OF MAKING SAME. U.S. Patent 2,261,097.
- (256) _____
1942. TEXTILE TREATING CHEMICAL AND PROCESS OF MAKING SAME. U.S. Patent 2,285,948.
- (257) _____
1943. TEXTILE TREATING PROCESS. U.S. Patent 2,315,135.
- (258) _____
1943. TEXTILE TREATING CHEMICAL AND PROCESS OF MAKING IT. U.S. Patent 2,333,623.
- (259) SAUER, JOHN CARL.
1941. PRODUCT AND PROCESS. U.S. Patent 2,268,169.
- (260) _____
1943. QUATERNARY AMMONIUM COMPOUNDS. U.S. Patent 2,310,873.
- (261) _____
1943. PRODUCT AND SYNTHESIS THEREOF. U.S. Patent 2,323,938.
- (262) _____
1945. KETOETHENONES AND PROCESS THEREOF. U.S. Patent 2,369,919.
- (263) SCHIRM, ERIK.
1935. DYEING CELLULOSE. German Patent 613,735.
- (264) _____
1940. HIGH MOLECULAR WEIGHT ISOCYANIC ACID ESTERS. U.S. Patent 2,225,661.
- (265) _____
1941. PROCESS OF RENDERING TEXTILES WATER REPELLENT. U.S. Patent 2,252,039.

- (266) SCHIRM, ERIK.
1942. PROCESS AND PRODUCT FOR MAKING TEXTILE AND OTHER MATERIAL WATER-REPELLENT. U.S. Patent 2,303,364.
- (267) SCHUYTEN, H.A., WEAVER, J.W., and REID, J. DAVID.
1947. PREPARATION OF SUBSTITUTED ACETOXY SILANES. J. Am. Chem. Soc. 69:2110-2112.
- (268) SHIPP, JOSEPH HARREL.
1939. QUATERNARY AMMONIUM COMPOUNDS AND PROCESS OF PREPARING THE SAME. U.S. Patent 2,146,408.
- (269) _____
1939. TREATMENT OF TEXTILE MATERIALS. U.S. Patent 2,160,176.
- (270) _____
1941. AMIDOMETHYL ESTERS. U.S. Patent 2,232,485.
- (271) SINGER, RUDOLF JULIUS RAMON.
1938. VANDSKYDENDE TAVE- ELLER FIBERMATERIALE OG FREMGANGSMAADE TIL DETS FREMSTILLING. Danish Patent 55,494.
- (272) SLOWINSKE, G.A.
1941. "ZELAN" -L IN THE FINISHING PLANT Cotton (Atlanta) 105(12):67-70.
- (273) _____ and POPE, ARTHUR G.
1947. A CORRELATION OF WATER-REPELLENT GARMENT PERFORMANCE AND LABORATORY PENETRATION TESTS ON FABRICS. Amer. Dyestuff Reporter 36(5):108-121.
- (274) SMITH, GENEVIEVE and WELLINGTON, HELEN A.
1947. EVALUATION OF VARIOUS WATER REPELLENT TREATMENTS ON TWENTY-THREE COTTON FABRICS. Rayon Textile Monthly 28:332-34; 371-73; 423-26.
- (275) SOCIÉTÉ POUR L'INDUSTRIE CHIMIQUE À BÂLE.
1933. DYEING CELLULOSIC MATERIALS. British Patent 390,553.
- (276) _____
1933. DYEING PAPER OR PULP. British Patent 396,992.
- (277) _____
1939. COMPOSES THIOCARBAMIDIQUES. French Patent 849,146.
- (278) _____
1939. COMPOSES THIOCARBAMIDIQUES. French Patent 849,147.
- (279) _____
1939. VERFAHREN ZUR HERSTELLUNG EINES NEUEN CARBON-SÄUREAMIDDERIVATS. Swiss Patent 203,947.

- (280) SOCIÉTÉ POUR L'INDUSTRIE CHIMIQUE À BÂLE.
1939. VERFAHREN ZUR HERSTELLUNG EINES NEUEN TEXTILHILFSTOFFES.
Swiss Patent 204,237.
- (281) _____
1939. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 206,173.
- (282) _____
1940. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDEN-SATIONSPRODUKTES. Swiss Patent 210,977.
- (283) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 211,655.
- (284) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 211,657.
- (285) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN GEMISCHES VON
ORGANISCHEN ABKÖMMLINGEN DER THIOSCHWEFELSAURE. Swiss
Patent 212,401.
- (286) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 212,403.
- (287) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 213,553.
- (288) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 213,559.
- (289) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 213,560.
- (290) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 213,561.
- (291) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 214,541.
- (292) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 214,770.

- (293) SOCIÉTÉ POUR L'INDUSTRIE CHIMIQUE À BÂLE.
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 214,771.
- (294) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 214,772.
- (295) _____
1941. VERFAHREN ZUR HERSTELLUNG EINES NEUEN
KONDENSATIONSPRODUKTES. Swiss Patent 214,782.
- (296) STOCKER, E.
1928. PROCESS FOR INCREASING THE AFFINITY OF ANIMAL
FIBERS FOR DYESTUFFS. U.S. Patent 1,662,404.
- (297) STONE, HERBERT G. and MALM, CARL J.
1938. PROCESS FOR RENDERING A TEXTILE MATERIAL RESISTANT
TO MOISTURE. U.S. Patent 2,108,455.
- (298) STUDIENGESellschaft FÜR FASERVEREDELUNG M.B.H.
1935. PROCÉDÉ POUR RENDRE LES PRODUITS TEXTILES HYDROFUGES.
French Patent 791,435.
- (299) _____
1936. VERFAHREN ZUM WASSERABSTOSSENDMACHEN VON TEXTILIEN.
German Patent 636,396.
- (300) STÜHMER, GEORGE.
1942. VERFAHREN ZUM VEREDELN VON SOLCHEN NETZARTIGEN
TEXTILWAREN AUS CELLULOSE- ODER CELLULOSE- HYDRATFASERN,
DIE BEI BESTIMMUNGSGEMÄSSEN ANWENDUNG DER EINWIRKUNG VON
WASSRIGEN NETZMITTELHALTIGEN BÄNDERN AUSGESETZT SIND.
German Patent 725,795.
- (301) THOMAS, CHARLES A. and KOSOLAPOFF, GENNADY.
1946. CELLULOSE PHOSPHONAMIDES. U.S. Patent 2,401,440.
- (302) THURSTON, JACK THEO and NAGY, DANIEL ELMER.
1943. CARBAMYLGUANAMINES. U.S. Patent 2,333,452.
- (303) _____ and SWAIN, ROBERT C.
1943. GUANYLUREA SALTS. U.S. Patent 2,310,045.
- (304) TOOTAL BROADHURST LEE COMPANY LTD.
1939. PROCÉDÉ D'APPRETAGE DE PRODUITS TEXTILES. French
Patent 842,580.
- (305) TROWELL, WILLIAM W.
1943. METHOD OF FINISHING TEXTILES. U.S. Patent 2,317,499.
- (306) ULRICH, HEINRICH and KOERDING, PAUL.
1940. PROCESS FOR IMPROVING TEXTILE MATERIALS. U.S. Patent
2,186,889.

- (307) WAKEHAM, H. and SKAU, E.L.
1945. A TENSIOMETRIC METHOD FOR EVALUATING SURFACE
WETTABILITY BY MEASUREMENT OF THE CONTACT ANGLE.
J. Am. Chem. Soc. 67:268-272.
- (308) WALTMANN, ERNST.
1940. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT AND
PRODUCTS THEREFROM. U.S. Patent 2,220,856.
- (309) _____
1941. PROCESS FOR TREATING TEXTILES. U.S. Patent
2,264,490.
- (310) _____
1942. WATER-REPELLENT TEXTILE PRODUCT. Canadian Patent
409,665.
- (311) _____
1942. PROCESS FOR PRODUCING WATER-REPELLENT TEXTILE
MATERIALS AND PRODUCT THEREFROM. U.S. Patent 2,277,174.
- (312) _____
1942. PROCESS FOR RENDERING TEXTILE MATERIALS WATER-
REPELLENT. U.S. Patent 2,288,868.
- (313) _____ and WOLF, EDGAR.
1939. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT.
British Patent 508,173.
- (314) _____
1939. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT AND
PRODUCTS THEREFROM. U.S. Patent 2,173,029.
- (315) _____
1942. WATER-REPELLENT TEXTILE PRODUCT. Canadian Patent
409,664.
- (316) _____
1942. PROCESSES FOR RENDERING TEXTILES WATER-REPELLENT.
U.S. Patent 2,297,731.
- (317) _____
1945. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT.
U.S. Patent 2,380,133.
- (318) WARWICK CHEMICAL COMPANY and CLARK, GORDON M.
1944. WATER REPELLENTS AND THE TREATMENT OF TEXTILES
THEREWITH. British Patent 560,448.
- (319) WENGRAF, P. and SCHWARZ, E.W.K.
1942. WATERPROOF AND WATER REPELLENT FINISHES. Am.
Dyestuff Reporter 31:551-558.

- (320) WEST, HERBERT J.
1944. QUATERNARY NITROGEN CONDENSATION PRODUCTS OF METHYLOL
UREA ETHERS. U.S. Patent 2,344,934.
- (321) _____
1946. TEXTILE FINISHING. U.S. Patent 2,397,451.
- (322) _____
1947. RESIN FINISHING OF TEXTILES. U.S. Patent 2,420,157.
- (323) WIRTH, WALTER V. and DEESE, ROBERT F., JR.
1940. PROCESS FOR PREPARING QUATERNARY AMMONIUM COMPOUNDS
AND INTERMEDIATES THEREFOR. U.S. Patent 2,212,654.
- (324) _____ and DEESE, ROBERT F., JR.
1942. PROCESS FOR PREPARING ACYLAMINOMETHYL QUATERNARY
AMMONIUM COMPOUNDS. U.S. Patent 2,291,519.
- (325) WOLF, EDGAR.
1939. VERFAHREN ZUR HERSTELLUNG QUARTÄRER AMMONIUM-
VERBINDUNGEN. German Patent 673,589.
- (326) _____
1941. CHEMICALS FOR WATER REPELLENCE. U.S. Patent
2,242,565.
- (327) _____
1942. PROCESS FOR RENDERING TEXTILES WATER-REPELLENT. U.S.
Patent 2,294,435.
- (328) _____
1942. HALOMETHYL ALIPHATIC AMINO COMPOUNDS AND PROCESSES
OF MAKING THEM. U.S. Patent 2,296,412.
- (329) _____
1942. WATER-REPELLENT TEXTILES, AND PROCESS FOR MAKING
SAME. U.S. Patent 2,301,352.
- (330) WOOD, FREDERICK CHARLES.
1940. TEXTILE FINISHING PROCESS. U.S. Patent 2,200,944.
- (331) ZERNER, ERNST, DAVIES, GERTRUDE D.M. and POLLAK, PETER I.
1946. PROCESS FOR FINISHING TEXTILE MATERIALS, PARTICULARLY
TO RENDER THE SAME WATER-REPELLENT. U.S. Patent
2,413,024.
- (332) ZERNER, ERNST and POLLAK, PETER I.
1944. STUDIES IN WATER-REPELLENT PYRIDINIUM COMPOUNDS.
Textile Research 14:242-245.

